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BRS&H REORGANIZATION DESIGNED TO MEET STATE AND FEDERAL REQUIREMENTS

Necessitated by Senate Bill 388 and prompted by the Justice Department suit filed against former Director of the Department of Institutions Edwin Kellner and former Acting Superintendent of BRS&H Jerry Butcher, the reorganization of services at BRS&H is happening! The restructuring is designed to comply with new federal laws and legal descriptions which affect the care and treatment of mentally retarded individuals. Last summer the Montana Legislature passed remarkably enlightened legislation such as Senate Bill 388 which specifies the procedures that must be followed to safeguard a retarded person's rights when admitted to a residential facility and moreover, the procedures to be followed after admittance to insure that a comprehensive treatment program is formulated and implemented. The Montana Legislature also passed Senate Bill 289 which appropriated funds for approximately 200 staff additions. More direct care staff were needed to meet the JCAH (Joint Commission on Accreditation of Hospitals) recommended standard of 1:1 ratio of employees to residents (this ratio actually yields one staff to four residents during the day and 1:8 during night shift).

Individual Plans of Habilitation

The new Habilitation Department was created in response to SB 388's mandate that "each resident has a right to a habilitation program which will maximize his human abili-

ties and enhance his ability to cope with his environment." This requirement is met by the formulation and implementation of Individualized Plans of Habilitation (IPH's) for each resident at BRS&H. To arrive at these IPH's, each resident must be given a thorough evaluation by each appropriate professional treatment area. The evaluations will be reviewed by the Habilitation Planning Committee which will basically consist of a physician, a psychologist, the resident's social worker and cottage supervisor, cottage staff selected by the cottage supervisor, a habilitation planning coordinator, and staff from various professional specialty areas, as needed. The IPH is intended to provide the total plan for a resident's life at BRS&H as well as plans for treatment in a community setting, if indicated. A monthly review will keep the plan current.

Habilitation Department

In addition, the reorganization dictates that a qualified professional person be in charge of each cottage living area. To accommodate this, 13 cottage supervisor positions were created to carry the responsibility and authority for the development of the IPH's. In order that direct care staff be trained to deliver the habilitation services, the reorganization plan also included two inservice training instructors (Habilitation Aide V's) in each cottage. Besides providing inservice training for cottage staff, they will act in

the absence of cottage supervisors, assist in monitoring and evaluating IPH's, and carry out treatment programs themselves. Individualized Plans of Habilitation will be implemented primarily by HA I's and II's although it is the philosophy of the habilitation department that everybody is part of the therapeutic team and as such should be involved in running direct programs to some extent.

Two Habilitation Coordinator positions were created to coordinate the overall habilitation programs for several resident living areas, as well as insure that institutional policies and state and federal requirements are complied with in those areas. Those positions are filled by Margaret Douglas and David Anderson. Richard P. Swenson, Ph.D., Director of Title I for three years, now fills the position of Director of Habilitation Department. His overall responsibility is to insure that each resident has an active IPH which includes behavioral goals and methods for evaluating those goals.

Preservice Training Section

Federal requirements (ICF-MR) also dictate that inservice training be provided for staff on a continual basis. A new Preservice Training section was created to meet this need. One component of this department will be Continuing Education. This section will help develop the curricula for inservice training which will in turn be implemented by HA V's. Ron Langworthy will be working with Dick Van Haecke, Director of Preservice Training, in this area. Preservice will also develop curricula for upgrade training for position advancement, will coordinate student internship programs and possibly work toward developing an Associate of Arts degree program at BRS&H.

Increased professional accountability

The ~~new~~ professional scheme has attempted to have clinical and support systems more responsive to the needs of cottages. One way this is attempted is to have the habilitation department negotiate with each professional department to determine the exact nature of the accountability that department has to the residents. For example, the speech pathology section aides are scheduled to be in various cottages at various times to run programs and to vary from this schedule requires the approval of the Director of Speech Pathology and the cottage supervisor. Departments other than the professional ones are also becoming more responsive in providing services to the cottages.

New Title I grant

Because the state of Montana has assumed responsibility for training both basic self-help and higher level skills (by appropriating enough staff to do so), the Title I grant at BRS&H has changed its focus to retain its supplementary status.

The 1976 Title I grant is basically involved with communication skills for the 184 Title I eligible (under 21 years of age) residents at BRS&H. The grant is directed at the needs of those residents with general communication difficulties not appropriate for service by the Speech Pathology and Audiology Department. Title I programs will not deal with technical communication problems such as poor articulation but with such basic communication-related skills as eye contact, compliance, vocal and motor imitation, social interaction and play. When a resident has acquired the necessary

pre-requisite communication skills, then the speech department can devise a formal speech program for that individual.

The training effort will be channeled into four components:

1) The Pre-Symbolic Communication Project will emphasize pre-symbolic needs such as eye contact, motor imitation, vocal imitation, compliance, and social/play behaviors. Twenty residents aged 5-15 years will be served in this program.

2) The Symbolic Communication Project will involve training 20 young residents in symbolic communication skills such as receptive and expressive language development.

3) Sixty-four multihandicapped residents within the nonambulatory unit at Boulder will be served in a program called the Multihandicapped Communication Project. The program will emphasize training in pre-symbolic, receptive, expressive and/or nonverbal communication. Targeted behaviors in many cases will include directed eye contact, directed motor movements and differential responses to objects. Environmental enrichment and design objectives will also be involved.

4) Eighty residents will be served in a program called the Cottage Communication Project. This program's emphasis will include training in pre-symbolic skills and receptive and expressive language. In addition, environmental enrichment aimed

at facilitating language development will be involved.

The environmental enrichment and design objectives are included in this year's grant to provide a program that serves every resident counted in the Average Daily Attendance (ADA totals 184 residents) and still allow the program to have considerable impact. The enrichment program will transcend the mere addition of pictures, etc. but through instrumentation techniques available the enrichment aspect will require actual responses from residents. Examples of this are the language master and voice-light machines. The Title I program will evaluate the cottage living environments and document the effects of the environmental enrichment and design objectives.

The 1976 Title I grant will fund 12 positions: 2 Habilitation Aide V's in each of the four communication projects; 1 Supervisor/Coordinator (filled by Tom Seekins); 1 Instrumentation Specialist; 1 half-time Information Disseminator and 1 half-time Environmental Technician.

BRS&H's Speech Pathology and Audiology Department will provide in-service training for Title I employees. Training will be given throughout the year in weekly staffing meetings with the speech department.

Special thanks
The staff at BRS&H are confident

that the long planned reorganization will facilitate better services, thus a better chance for success by the residents. Budgeting institutions at all is a mammoth task, much less completely restructuring them. The Boulder Behaviorist would like to especially acknowledge a few individuals and groups who helped move the system:

Keith McCarty, former Superintendent of BRS&H, who first called attention in the press to the lack of services and inhumane conditions at BRS&H;

Governor Tom and Mrs. Carol Judge who publicly supported increased funding and resources for BRS&H;

The Coalition for Rights of the Disabled, a group of BRS&H employees who publicized the need for legislative reform on television and in newspapers;

The 1975 Montana Legislature for appropriating the funds and especially Tom Towe of Billings for sponsoring SB 388.

BRS&H Superintendent William Conyard, Dr. Richard Swenson and Richard Heard, who with many other BRS&H staff, worked out a feasible plan for upgrading the services that an institutionalized person at BRS&H receives.

HABILITATION AIDE V POSITIONS OPEN

Applications are now being taken for several unfilled Habilitation Aide V positions. The job requires a Bachelor's degree in a health services related field (or an equivalent combination of education and experience) and pays \$10,434 per year (\$10,857 after July 1, 1976). The HA V position is a new one, formulated as part of the reorganized habilitation department. Each cottage is provided with two HA V's who are responsible for assisting and supervising cottage staff in the

development of resident training programs. They will develop and conduct the inservice training curriculum for cottage staff which will cover formal programs based on behavioral theory and techniques as well as incidental teaching (responding consistently to situations which will promote habilitation). They will supervise all areas relating to resident programming in the cottage, ensuring that staff is carrying out assigned programs and is using approved techniques. HA V's will also be responsible for training others in and evaluating the environmental enrichment of the cottage.

Program and staff evaluation are also components of the HA V's job duties. This will involve developing an evaluation system which indicates performance of cottage staff in classroom, formal and incidental training situations. It will also involve evaluating the success of training programs in the cottage and making changes in accordance with the Individualized Plans of Habilitation. They will insure that maintenance procedures are carried out with graduated programs.

Lastly, the HA V assists in the development and implementation of IHP's and personally conducts direct resident training programs. Time will be scheduled for the HA V to interact with the cottage residents on an informal basis to help in his or her evaluation of the residents' current needs, progress, etc.

Any person interested in investigating this exciting new position should contact Margaret Douglas or David Anderson, Habilitation Coordinators, BRS&H.

MAC DONALD TAKES NEW POST

Regular readers of the Boulder Behaviorist may have missed the

polished touch of former editor Margaret MacDonald who has taken a new position at BRS&H. MacDonald has assumed responsibility for editing the institution's on grounds newsletter Brush Up and a newsletter called Spot Check written for Montana legislators and parents of BRS&H residents. She will also issue news releases and generally disseminate information within and without the institution. We miss her presence on the B.B. but wish her much success in her new endeavor.

VAN HAECKE EXPLAINS INNOVATIONS IN INSERVICE TRAINING DEPT.

In an interview with the Boulder Behaviorist editor, Director of Preservice Training Richard Van Haecke discussed that section's plans to improve the training that new BRS&H employees receive. His first priority is to develop a comprehensive curriculum for Habilitation Aide V's (HA V's) who in turn will provide on-the-job training in the cottages to HA I's. "In an effort to make classroom training more functional rather than purely academic, we are developing a training program for HA V's (and eventually HA I's) that incorporates five residents in continuing programs," Van Haecke commented. The plan is that residents will be trained in the pre-service classroom Monday through Friday mornings by the PST instructors. New employees will be videotaped as they also practice training these residents. They will then spend part of the afternoon reviewing their performances.

For a long time employees have rightfully grumbled about the disparity between the academic theory of behavioral management they received in class and the reality that strikes them unprepared when

they go to their work assignments in the cottages. "This new system will fill the gap between training and application", Van Haecke said.

The five residents chosen to be trained in the daily program by pre-service training staff (on the basis of prepared IPH plans) will receive four kinds of training -- intensive programs (pre-academic, secondary dressing skills, etc.), socialization and fine motor skills, gross motor skills and tablemanners. These concurrently occurring programs in the classroom will be conducted by Van Haecke and staff members Jan Mackay, Steve Kanies and Ron Langworthy. They will rotate programs or "zones" to maintain expertise in each area of skill training. The "zone area" concept is modeled roughly after Todd Risley's model. As trainees complete the required target behaviors for one "zone", they will move onto the next zone at their own pace. Participants in the class will gradually be involved in the training to the extent that by the end of the training sequence, they should be able to conduct the class themselves. When HA V's are trained they will take their newly acquired skills back to the HA I's in the cottages and supervise their programs with residents.

The principle of "incidental teaching" has been incorporated into the zone area system. Incidental teaching refers to the use of daily events and tasks to require an appropriate response from a resident which can then be reinforced. For example, if you're about to serve chocolate cake to a verbal resident, you could ask, "What is this?". If the resident made no response you could say, "This is cake. Say cake and I'll give you a piece." When the resident says "cake", you give him cake (see Training Guidelines, BRS&H, 1975).

Another important component of the new preservice training curriculum is providing many contingent positive reinforcements (which will be much deserved considering how demanding the classes will be) and providing feedback to the trainees. One long range objective of PST is to develop most of the academic work into Personalized System of Instruction units. This would allow employees to study at their own pace for the academic portion of the training requirement for a promotion.

Van Haecke is chairman of a committee responsible for developing a complete training curriculum for all levels of staff in the cottages. Members of the committee are William Conyard, Jan Mackay, Ron Langworthy and Steve Kanies. The committee's first priority is to begin the training program for HA V's by January 12.

In the meantime new BRS&H employees are receiving preservice training based on the former model. However PST instructors Jim Burgess, Rhoda Gerard and Margaret Moore are revising standard classes such as orientation, communications, behavioral training procedures and mental retardation.

Many of the programmatic changes slated for the preservice training section are modeled upon the systems developed by Teaching Research, Monmouth, Oregon. Employees of PST will study at Teaching Research sometime in the near future.

The ultimate goal of PST's new curriculum is to train all levels of staff at BRS&H in proper training techniques and to increase the number of residents in the ongoing classes to 10. "We're very excited about the prospect of really making some significant improvements in an area that has been particularly difficult to manage," Van Haecke offered in conclusion.

MACKAY ATTENDS GOAL PLANNING WORKSHOP

Jan Mackay of the Preservice Training Department attended a three day workshop on goal planning with developmentally disabled persons in Hershey, Pennsylvania on October 28. The workshop's objectives were to train its participants in writing good individualized client plans and to qualify them to conduct similar workshops for others. Such a person is then called an associate instructor.

Workshops are typically designed for groups of 4-8 persons led by an associate instructor with audio tape material. An associate instructor's manual is available for his use and each participant has a workbook which explains the concepts and has space for notes and exercises. Workshops are conducted in five 2-hour sessions, ideally spaced a week apart. Between sessions participants work on the goal plans they developed in class for their clients.

Developed by Peter Houts and Robert Scott, goal planning is characterized by four basic strategies:

- 1) Involve the client from the beginning. The client has a right to his particular preferences; his likes and wants should be part of each goal that is set. As much as possible the client should participate in setting the goals which should be explained to the client. Even if the client is nonverbal and has very few receptive language skills it is important to interact with him prior to implementing the goal plan. By so doing you will get a more thorough idea of the client's needs and begin to establish yourself as a reinforcer to the client. A trainer should treat his client in a way that he himself would like to be treated. Put yourself in the client's shoes and try to feel what he feels.

2) Use the client's strengths to set goals which help with his needs. The workshop stressed the importance of recognizing a client's strengths--even if it is merely the absence of head-banging during the lunch hour. Other examples of client strengths are: likes animals, bright colors and reads on a third grade level. Whenever possible state a client's needs in positive terms rather than negatively. To define a client's need negatively as "stop him from slopping his food" makes people think of therapy in terms of punishment. A goal of "eating neatly" does not.

3) Use small steps to reach the goal. Breaking a need into many components makes it a manageable objective.

4) State clearly who will do what and when. Goals should be defined in objective behavioral terms with target dates attached for completion of the components.

Mackay described the goal planning workshop as a very involving one requiring everyone's active participation. The participants do many exercises in practicing goal-planning strategies. At the first meeting to get the trainees focused on thinking positively, each person described one of his personal strengths when he introduced himself.

An essential component to the success of goal planning is the support of the supervisors. Therefore an associate instructor contacts supervisors of workshop participants beforehand to insure their support and get their commitment that they will encourage staff to do goal planning.

As a guide to the associate instructor and supervisors of the front-line staff, the participants were given a notebook called "How to Catch Your Staff Doing Something

Right." The ideas outlined in this manual are:

1. Focus on what your staff members are doing right. This means using shaping to reinforce successive approximations by the staff.

2. Set reasonable expectations for staff. Let them know in advance what is expected of them and enhance their chances of success by working closely with them on a small number of well-prepared programs rather than on a lot of poor ones.

3. Be clear about what you expect. This involves letting them know what aspects of their performance you will be evaluating, and letting them know what will be said to others about their program. They should view the evaluation as a chance to show off.

4. Focus on client behavior. That is, evaluate the behavior of a staff member through the progress or lack of progress on the part of the client. Interact directly with the client and have the staff do the same instead of relying on paperwork for information.

In dealing with difficult clients, two strategies are presented: increase the client's positive behaviors and use small goals with small steps. Since the success of any program is dependent on the front-line (HA I) staff, they should be encouraged and their responsibility emphasized as much as possible.

The goal planning system of developing individualized client plans provides an efficient model for meeting federal, state and accreditation requirements by institutions, community agencies, vocational programs, etc. Furthermore, the system is flexible enough to be compatible with any treatment modality. Training materials are available from

the Department of Behavioral Science, Pennsylvania State University, College of Medicine, Hershey, Pa. (phone 717-534-8265). Materials are free of charge but supplies are limited. All materials may be reproduced provided they are not altered or sold for profit.

A.A.E.S.P.H. CONFERENCE LOOKS TO FUTURE OF INSTRUCTIONAL TECHNOLOGY

by George Siverts
Instrumentation Specialist

On November 12 - 14 in Kansas City I attended the Second Annual Conference of the American Association for the Education of the Severely and Profoundly Handicapped. There were several ideas discussed in various sessions which relate to the future of instrumentation at Boulder.

One discussion defined some of the attributes of a practical and effective instructional device: it must be easy to use, low in cost and a genuine addition to a teacher's resources. If training materials are hard to use, the response-cost associated with training can become intolerably high.

With ease of use as a major design criteria, I have been planning a teaching device which makes use of recent electronics developments such as the integrated circuit microprocessor. With the microprocessor, computer-like functions can be programmed into a device, providing capabilities not previously available in stand-alone teaching equipment. One of the biggest work-savers in a device of this kind is electronic program storage. A teacher is no longer burdened with the preparation of film slides or cutting out and pasting up stimuli for the programs. A teacher can call prewritten programs with a keyboard or write and edit his own in a fraction of the time previously required. In addition, routines

can be "built in" which would allow a teacher to set up a program with no knowledge of computer programming.

Another advantage of microprocessor technology in this application is its low cost. In the past, justifying the high cost of equipment has resulted in some rather exorbitant promises. Unfortunately the claimed performance of technology in education has largely failed to materialize, at least to this point. A major problem is that the costs have been all wrong. If a \$10,000 device produces small gains, it will probably be regarded with suspicion and will not come into general use. If the price comes down to around \$500 or less, however, the absence of astounding progress in the students becomes acceptable. Further, if the machine is sufficiently sophisticated and can perform desirable functions that a teacher can do only with great difficulty or not at all, it then can be regarded as a worthwhile addition to a teacher's resources.

An important point made during the session on instructional technology also relates to the design of teaching equipment, but in a different way. John Hollis, director of Kansas Neurological Institute, was concerned that some of the equipment now in use does not require specific responses of the subject or doesn't provide contingencies. He made the point that stimulation alone is not as valuable as some believe because no specific behaviors are reinforced. If anything is learned at all as a result of noncontingent stimulation, it is likely to be relatively nonfunctional since random responses are reinforced. Ideally, a teaching device should require a specific response, or perhaps rate of response, and provide rewards. An example of this would be a device which produces an audio stimulus such as a word and rewards the

student with a token if he presses the button under a picture associated with that word.

Jim Tawney, director of telecommunications for severely handicapped children and youth at the University of Kentucky gave an interesting presentation related to instructional equipment. His project is attempting to provide services for the handicapped who reside at home in sparsely populated areas. Access to qualified professionals and the services they provide has been limited for these clients and will probably continue to be so. As an alternative, Tawney's group has been installing instructional devices directly in the homes. They are then connected via phone line to a central computer based at the University. Each day these clients receive about 20 minutes of instruction on the machine. The actual devices and programs are individualized so as to be appropriate for the needs of each different student. So far, parent response has been enthusiastic and the program is running smoothly.

This approach was particularly interesting since it would be so appropriate for Montana. The devices I am planning to build would be well suited for this as they are being designed to "speak computer language" and would be relatively easy to interface with large facilities already in existence. Another nice thing about this approach is that training for parents wishing to learn how to deal effectively with their disabled children could be made available by this means. Also, evaluation of training for both parents and students would be built in since all parameters of interest could be continuously monitored in Helena. Such a program would be ideal for Montana because of its widely dispersed locales and wouldn't be too difficult to implement since much of the necessary, but costly, equipment is already in existence.

A program of this kind would provide a practical means of continuing to provide services to disabled persons as they continue to move into community settings.

Another topic discussed at the convention was the steadily growing demand for accountability in programming. As the demand for more data increases, the amount of staff time required to compile it increases. More and more of a trainer's time is consumed in handling data; eventually data collection can actually impair the effectiveness of the program. Requirements for accurate evaluation of programs are not going to go away, however, so means must be developed to handle the data efficiently.

I feel that some kind of electronic data collection scheme provides a solution to this problem. If data entry to a computer-based system were accomplished in the cottages by the trainers themselves, most of the paper in the system would be eliminated. A hand-held device could be constructed which would interface directly with a cottage based processor which in turn would communicate with the existing data system via phone line. Data collection would be easy, take little time, and the recording would be accurate.

Another advantage of a cottage based data entry system would be the availability of compiled data at the trainer level. One of the primary reasons for collecting data at all is to allow a trainer to make objective judgments regarding the effectiveness of his training procedures. Progress with severely/profoundly retarded is likely to be slow to the point where it is difficult to evaluate performance with a "seat of the pants" method. Detailed data can be a great help here, but a trainer

must have access to it, often on short notice. If a cottage based system were used in conjunction with the already existing central system at BRS&H, summarized data concerning specific programs could be made instantly available to a trainer who needed it.

Using the microprocessor technology mentioned earlier, a system designed to make data collection a trivial task and which would provide quick, meaningful feedback could be imple-

mented at relatively low cost. In fact, it is probable that the initial costs could be amortized in a couple of year's time. This would be the case if savings were figured simply on the basis of staff time involved; if increased program effectiveness were figured in, the system could be cost-effective in a shorter time.

Such a project could be useful at Boulder as well as other facilities facing the demands of increased accountability.

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THE BR&H GROUP HOME PROJECT: A PRELIMINARY REPORT

by Timothy Plaska
Assistant Administrator
Community Services

On Tuesday morning February 17, a new project became operational at BR&H. The Social Learning Research Project, a component of the Community Services Department, is located in a group home on the grounds of the institution and has begun providing direct care and habilitative training to residents who have chronically engaged in extremely disruptive and/or aggressive behaviors.

The major goal of the new project is to develop an effective program to provide intensive training to residents whose maladaptive behaviors have prevented them from being transferred to less restrictive community facilities.

Group home

One of the primary concerns of the pro-

ject is to investigate the efficacy of using a group home model to develop and to support adaptive behaviors in severely retarded, extremely disruptive residents. Last December a house which had previously been occupied by an employee of the institution was selected as the group home site. It was then remodeled and furnished to resemble as closely as possible a typical home in the community.

Staffing pattern

The home will be staffed on a shift basis to provide adequate coverage 24 hours a day, seven days a week. Program development and evaluation as well as staff in-service training will be the responsibilities of a Habilitation Aide V assigned to the project. During each shift direct care workers under the supervision of an HA III will conduct individual and group training programs and will escort residents to various training areas outside of the house. The training will include things such as the preacademic classes in the school, the vocational training



Group home residence



HA V Greg Ragee with resident

program and the recreation center. In addition, one employee will be assigned to a night watch position and will provide supervision from 10 p.m. to 6 a.m. each day.

Residents

The residents who will be transferred to the group home are selected using two general criteria - high rates of extremely disruptive behaviors (property destruction, aggression, noncompliance, etc.) and unresponsiveness to previous intervention strategies currently available within the institution. The project is scheduled to begin working intensively with two individuals and to gradually expand to serve a maximum population of four residents.

Program development

Project staff are currently engaged in assessing the individual skill deficits of each resident. This information as well as input from other areas of the institution will be used in formulating Individual Habilitative Plans. Specific target behaviors and procedures to systematically consequence them are also being defined. Baseline data in the form of videotapes and pre-move frequencies of maladaptive behaviors are being collected and will be used to evaluate program effectiveness.

Individual training programs designed to meet the skill deficits of each resident and prepare him to function more independently will be conducted in a consistent and systematic manner as an integral part of the total training program.

BRS&H CONTRACTS WITH TEACHING RESEARCH by Margaret McDonald

Editor of BRUSH UP and SPOT CHECK

BRS&H has finalized a contract with Teaching Research in Monmouth, Oregon to help set up this institution on a training model. Teaching Research is a division of the Oregon State System of Higher Education involved in, among other things, developing model programs for the exceptional child. It is funded by both state and federal monies.

BRS&H and Teaching Research staff will be working together to make this a nationally recognized model facility for care and treatment of retarded citizens.

In recent weeks, close to 20 staff members have gone to Monmouth for week-long training sessions. In March Teaching Research will send staff to Boulder to help improve a training center for staff who provide training and/or treatment services to our handicapped. The staff training program will include actual training of the handicapped in a special classroom and follow up in the cottages where employees will receive further instruction and evaluation of their performance.

Teaching Research is involved in numerous federal and state programs. As an example of their work, the Bureau of Education for the Handicapped, a division of the Department of Health, Education and Welfare, has awarded them four training model grants: 1) to develop a group home model for emotionally disturbed adolescents 2) to train personnel to work in group homes for severely handicapped clients 3) to train parents to work with

their handicapped children in the home
4) to train teachers, resource people and administrators to provide training to severely handicapped children in school.

Teaching Research focuses on skill training with on-site follow up to allow for individual adaptations. Thus, BRS&H is a unique institution so Teaching Research will cater its services to our needs. The contract will be a long term one, lasting through the current biennium and probably into the next one, according to Superintendent William Conyard. Ron Langworthy has been appointed to work as a liaison between the institution and Teaching Research.

BUTTE BOARD REVERSES BOX VOTE

The threatened jobs of four Butte educators were reinstated January 19th when Butte school trustees reversed a previously announced disciplinary action. The Board had ruled that teachers Sally Ulsher and Gayle Slagg would not be rehired, that Principal Don Harrington would be demoted and the position of Pupil Personnel Director Rudy Koch would be redefined. The most recent Board decision directs that the four be issued reprimands.

The contracts of special education teachers Ulsher and Slagg were cancelled on January 5 as a result of a news article stating that they had locked a 12 year old retarded boy with bronchial asthma in a $4\frac{1}{2}$ X $4\frac{1}{2}$ X 3 foot unventilated time-out box for disrupting classroom activities. The mother had not been consulted. The incident received nation wide publicity (see Boulder Behaviorist, Vol. 3 No. 7).

The Board's reversal of the original severely punitive decision was precipitated by heavy public pressure to reinstate the teachers. Petitions circulated by parents at the school and two unions carried 8,000 signatures. Nearly 500 people attended the school board meeting and many letters to the editor appeared in local newspapers.

The box incident pointedly illustrates the need for a system of licensing and monitoring practitioners of behavior analysis. It is also apparent that more public education is needed so that the community understands the useful function of a properly implemented seclusion time-out procedure (other procedures such as exclusion time-out do not require use of a room or other secluded area and involve little chance of abuse). The trainee should have ample room to move around in a space that is well ventilated, lighted, padded or otherwise safety ensured and has a window through which he is constantly observed. Such a procedure should be discussed beforehand with the trainee's parents and approval obtained from the therapist's supervisors and a human rights committee if possible.

There are also several heartening aspects of the "Butte box" incident. It is good to see that the retarded child has many advocates watch-dogging his rights. It is also good to see common sense prevail over hysteria. Surely the teachers were mistaken in using such a restrictive form of time-out and in neglecting to obtain parental permission.

But it seemed that the initial wave of shock over the "unusually cruel" procedure was tempered as people gained some perspective on the issue. Is it really more cruel to put a child in a time-out box for a maximum of 20 minutes than such historical behavior controls as berating and humiliating the person in front of his peers, of paddling his bare bottom or making him stay after school for a month and write 500 times "I will not disrupt the classroom"?

Incidents like this unfairly damage the credibility of all behavior analysts. In one sense the extreme harassment and bad publicity that the four Butte educators received over the incident may serve to deter other abuses by teachers. A better system is needed however that ensures the proper training in behavioral techniques of teachers and parents alike.

NEW PROFESSIONALS AT BRS&H

by Christy Walsh

Clerk

New Recreation Therapist Gloria Danielson of the Community Resource Team recently earned her degree in therapeutic recreation from the University of Oregon in Eugene. Originally from Red Wing, Minnesota, Danielson has five years experience as a recreation worker with mentally retarded people. She loves anything outdoors, specifically camping, fishing, mountain climbing, horseback riding and hiking. She is single and is currently learning to play the dulcimer.

Sandi Fishback recently came to BRS&H from Kansas City, Missouri where she earned her BA in elementary education at the University of Kansas City. She has 24 hours of graduate work in psychology. Fishback has had quite a bit of teaching experience. In Kansas City, she taught exceptional children in a private school for 3 years. She worked as an HA I in cottage 14 before being promoted to an HA V. One of her interests is horseback riding. She lives in Clancy with her two children and said, "I really love Montana."

Pat Friman came to BRS&H as an HA I before being promoted to HA V. He has a BA degree in psychology from the University of Montana. Friman is originally from Great Falls and worked in Missoula as an electrician. He is now moving to Butte. When asked why he came to BRS&H he replied, "I came here to expand my knowledge of the behavioral field and apply the education received at the University of Montana to a real life situation." His interests are cross country skiing, reading and hiking.

Mike Hanshew is a new HA V working in Cottage 15. Hanshew's home is Cleveland, Ohio where he received his BA in psychology from Cleveland State University. He worked for 2 years in a Boys Club in Cleveland and enjoys back packing and skiing. He is married and is

presently living in Helena.

Lori Hartman came to BRS&H from Billings last November. She received a BA degree in psychology from the University of Montana. During her college career she learned to sky dive which she said was really enjoyable. After she received her degree she traveled around the country and spent some time at Park City, Utah where she enjoyed the skiing. She is now living in Boulder and plans on doing some cross country skiing.

Roy Holmstrom came to our staff last December 15 and is now living in Butte. Holmstrom's home is Michigan. His education includes a BA degree in psychology from Western Michigan University. He enjoys traveling and has marked some 6,000 miles through Michigan, California and Oregon. He also enjoys downhill and cross country skiing, camping, hunting and fishing. Holmstrom is now employed at BRS&H as a Title I Training Officer.

Speech pathologist Jon Kahle was recently hired as part of the Community Resource Team. Kahle earned his M.A. in speech therapy from Western Michigan and was working towards his doctorate at the University of Kansas before coming to Montana. His previous experience includes private practice in speech therapy. This avid plant cultivator describes himself as a "regular Joe" who is single.

Ron Madsen is a new HA V in cottage 4. Madsen comes from South Dakota where he earned his B.S. degree in psychology from South Dakota State University. While in college, Madsen worked as a radio announcer for 4½ years. He also worked as a counselor in a detention center for 4 months. His interests include skiing and judo. He was on a judo team in college and is helping to get judo started at BRS&H. Madsen now lives in Boulder.

New speech therapist Ruth McDonough earned her degree in speech pathology and audiology from the University of Montana. She, her husband and two children aged one and four years are a much traveled family. Her last job was a speech therapist in

Rhodesia where her husband taught. Now living in Helena, McDonough reports, "I really like my job here because of the people I work with. Her hobbies are skiing and sewing.

BRS&H's new Hospital Administrator, Richard Moore, comes from Palos Verdes Estates, Los Angeles. His education includes a B.S. degree in finance from UCLA, an MA in Hospital and Health Administration from the University of Iowa and an internship at the University of California Medical Center in San Francisco. Moore has 12 years of experience in hospital administration. Moore's wife Barbara is a registered nurse and is presently in Los Angeles trying to sell their home. The Moores, who have two boys aged nine and four, are looking for a home around Boulder or Helena. They left California to move to a less congested area and because of the malpractice crisis in California and Texas. One of Moore's interests is tennis; he played varsity tennis at UCLA.

Mike Muszkiewicz was recently employed as a cottage supervisor of cottage 16 (non-ambulatory). He received a bachelors and masters degree in psychology from Western Michigan University. He is married and has no children. Before coming to Montana Muszkiewicz worked as a psychologist for two years at Murdoch Center, Butner, North Carolina. His interests include skiing, hiking and playing the guitar.

Susan Otting recently arrived here from Michigan and is now living in Boulder. She wanted to move out west so she applied for and got an MA V position at BRS&H. She was a therapist for 1 year at the Kalamazoo Valley Multihandicapped Center, Kalamazoo, Michigan. Her education includes a BA degree in behavioral psychology from Western Michigan University. Her interests are sewing, crocheting, camping and the outdoors. Susan said she "just loves the mountains in Montana."

MA V Greg Ragee came to Boulder because of the geography. Assigned to the group home, Ragee earned his M.S. degree in behavior modification from Southern Illinois University in Carbondale. His experience includes doing his practicum under Nathan Azrin at Anna State. He is single and lives in Boulder. His interests include photography and most outdoor activities.

Rusty Redfield came to BRS&H recently as the director of Community Services. Redfield did his undergraduate work at Rocky Mountain College in Billings. He then earned an M.A. degree in rehabilitation counseling from the University of Oregon. Redfield worked for the State Rehabilitation Agency in Anchorage, Alaska for 5 years. He also worked for 2 years in a state hospital in Concord, New Hampshire. Redfield grew up near Valispeil and is married with two children. The family enjoys skiing, fishing and camping.

New Training Officer I Diana Spas recently moved to Whitehall from Dixon, Illinois. She received her master's degree in special education from Northern Illinois University in 1975. Before moving to Montana Spas was employed as an Associate Language Specialist for Title I and has two year's experience teaching in a day care center for severely handicapped children. She reported that she and her husband Ted moved to Montana because they had seen the movie Jeremiah Johnson too many times but laments, "the spring weather disappoints me; I thought I'd feel like a pioneer" (but this comment came last week; she probably feels differently about things now). Six months pregnant, Spas' hobbies are sewing, Chinese food, organic gardening and keeping their two large dogs in tow.

Ted Spas came to BRS&H to be cottage supervisor for cottage 6. He has a degree in Asian history with a minor in political science plus 20 hours completed towards a masters degree in special education. Spas also has an Illinois teaching certificate in secondary education for retarded children (trainable or sub-trainable). He said, "I decided to come to Montana when I found

out the mountains were not going to come to Illinois." He now resides with his wife Diana in Whitehall. He enjoys hiking, snow shoeing, hunting, camping and beer drinking.

Dr. Peter Taubenberger, newly named Clinical Director of BRS&H, is from The Dalles, Oregon where since 1973 he served at the Columbia Park Hospital and Training Center, a state institution for the mentally retarded. From 1967 to 1973 Dr. Taubenberger was second in charge of the Medical Department at Saskatchewan Training School, Moosejaw, Saskatchewan, Canada. Dr. Taubenberger received his medical degree at the University of Munich, Germany and has done special work in hematology pathology and has made studies of epileptics and their medication programs. He spent 6 years in his own practice in Landau, Germany. He is a member of the Oregon Medical Association, A.M.A. and American Association of Mental Deficiency. Dr. Taubenberger, his wife and two children enjoy skiing, swimming and camping.

Paula Williams joined our staff at BRS&H as a dietitian. Her background includes an internship at Yale Medical Center and she recently completed the test for A.D.A. Ms. Williams has a B.S. degree in dietetics from the University of Wyoming. She is a native of Wyoming and plans to reside in Boulder.

COTTAGE 14 SCHOOL REPORTS

by Randy Skorpik

Habilitation Aide V

The students of the Cottage 14 Cabin School (newly renamed the Pre-Symbolic Communications Project - PCP) have a new teacher, Sandi Fishback. Sandi has worked in cottage 14 for several months and has exemplified her talents there by successfully completing several training programs. Sandi has previously trained autistic children at the University of

Missouri at Kansas City. The inclusion of Sandi on the teaching staff of the cottage 14 school should prove to be a valuable asset.

PCP has been in operation for six months. The basic goal of the school is to offer an opportunity for cottage 14 residents to engage in a pre-school setting. The school is presently serving 11 profoundly retarded students in development of pre-symbolic communication skills. Specific programs within the project which are basic to pre-symbolic communication include teaching of appropriate sitting and attending behavior and gross motor imitation. The gross motor imitation program will develop into receptive language programs, discrimination programs, appropriate play programs, manipulation of objects and expressive language programs.

Currently the two Title I HA V's in the school, Sandi Fishback and myself, have been reassessing goals and priorities for individual students. We received inservice training from the Speech Pathology and Audiology department in basic language and communication. The reassessment and speech training have reinforced the developmental directions previously proposed by the teaching staff. We are still lacking refined assessment tools and basic programs for profoundly retarded children. If your facility has either of these, please communicate by contacting Randy Skorpik, Title I, BRS&H.

In conclusion, the staff of cottage 14, Title I personnel and I would like to extend our appreciation and gratitude to Pat Dion for her efforts directed toward the cottage 14 cabin school. Pat's "on task" behavior concerning school structure and development have greatly influenced the quality of the cottage 14 PCP program.

THE BOULDER BEHAVIORIST SUPPLEMENT

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Boulder River School and Hospital
Boulder, Montana 59632

Control of Undesirable Behavior: The Use of Brief Periods of Required Relaxation to Reduce the Frequency of Undesirable Behaviors

By Tom Seekins
Coordinator/Supervisor
of Title I

ABSTRACT

The restitution procedure of quiet training, or required relaxation, has been shown to be effective in reducing physically disruptive behavior when used in combination with other procedures or when used alone for an extended length of time. This report demonstrates the effectiveness of relatively brief periods of required relaxation and discusses required relaxation as a special case of time-out from positive reinforcement.

The behavioral method known as restitution, used in the elimination of physically disruptive acts such as aggression and property destruction, consists of five general procedures: household orderliness training, social reassurance training; oral hygiene training, medical assistance training, and quiet training (Foxy and Azrin, 1972). Quiet training consists of sending a person to his bedroom, contingent upon the exhibition of some undesired response, and requiring him to remain there quietly for a period of time before he is allowed to return to the general activity area.

Quiet training has been used, in conjunction with the other four general restitution procedures, to reduce the frequency of screaming in a brain-damaged woman (Foxy and Azrin, 1972). Required relaxation alone (quiet training) was used successfully to reduce the frequency of undesirable behaviors in eight retarded adults.

In the former demonstration, upon exhibition of the target response, the subject was taken to her bedroom where she was required to remain on her bed for 15 minutes without a disruption. If she was disruptive, the timing of the period began again (a DRL 15 min). Following the required period of quiet, the other restitution procedures were administered.

The latter study (Webster and Azrin, 1973) was designed to test the effectiveness of quiet training (required relaxation) when used as the sole technique. Upon the exhibition of a target response, a subject was taken to a bedroom and required to remain on a bed for at least two hours. If the subject exhibited any disruptive behaviors in the final fifteen minutes of required relaxation, he would be required to remain on the bed until fifteen consecutive minutes had elapsed without a disruption.

The two studies mentioned have demonstrated that the method of required relaxation, or quiet training, is effective in reducing the frequency of certain undesirable behaviors. There is, however, some methodological confusion in comparing the two studies, and some questions which remain open to discussion. First, though Webster and Azrin's study utilized a two hour period of required relaxation, the termination of the session was contingent on non-disruptive behavior in the final fifteen minutes; no response in the first 105 minutes of the session controlled a contingency.

This parallels the 15 minute contingency required by Foxx and Azrin, 1972 . The question is whether the two hour period was necessary (to replace the other restitution procedures one supposes) to control the behavior, or whether the 15 minute requirement as in Foxx and azrin was sufficiently functional to control the behavior.

Secondly, the procedure of required relaxation parallels seclusion time-out (Risley-Florida Guidelines). That is, required relaxation has several elements in common with seclusion time-out procedures. Both procedures remove the offender from the situation in which a disruptive behavior was performed, places the offender in an area in which reinforcers are not readily available, and requires a period of calm before a person may return to the area of general activity (Foxx and Azrin, 1972; Pendergrass, 1971). Further, research in the duration of time-out (White, Neilsen, and Johnson, 1972) suggests that moderate durations of time-out such as 15 minutes are optimal. Can a shorter period of required relaxation control the frequency of undesirable behavior?

Thirdly, does the simple interruption of the undesirable behavior effect its reduction or is the period of required relaxation the necessary component?

This demonstration attempted to extend the procedure of required relaxation to a younger, more profoundly retarded population than that mentioned in the literature. This population also exhibited other undesirable behaviors than those described in the literature. This study also attempted to determine if a brief period (5 minutes) of required relaxation was capable of reducing the frequency of certain undesired behaviors. Further, it attempted to determine whether simple interruption of the target response or the procedure controlled the behavior.

METHOD

SUBJECTS: Ray, Mike and Billy

SETTING: All three people resided in C-14, a cottage for profoundly retarded children between the ages of 12 and 16. The cottage was one of four of the behavior modification unit at Boulder River School & Hospital.

TARGET BEHAVIORS: Target behaviors for Billy included "throwing objects at people or striking people with limbs or objects as weapons". Target behaviors for Ray included slapping or scratching or playing so roughly with another that they cried. Target behaviors for Mike included striking others or pushing others so that they were knocked off balance.

BASELINE: A separate baseline was conducted on each individual at different times. The baseline for Billy was conducted using a MANIFEST SCALE (Cataldo and Risley, 1974). A total of 90 observations were made, one each fifteen minutes for specified time blocks over six days. The baselines for Ray and Mike were conducted by asking the entire staff to record on a specified piece of paper the time and a description of each observed occurrence of a target behavior. These baselines lasted eight days for Ray and four days for Mike.

PROCEDURE: The entire staff of the cottage was instructed in the use of the required relaxation procedure. When they observed one of the three residents exhibit a target behavior which had been defined for him, the staff member was to walk over to him and say in a neutral manner, "(name), no. You have hurt (name). You must go to your room." They were then to escort the offender to his bedroom (standing behind him with one hand on his back and one hand on his arm) with as little commotion, attention, or verbal interaction as possible.

Once in the bedroom, they were to place the resident on his bed, turn out the lights, draw the curtains, and exit the room, leaving the door slightly ajar to allow observation of the resident. All disruptive behaviors such as screaming, crying, raveling the bed, etc., were to be ignored. If the resident got off of the bed, the observing staff member was to enter the room and have him lie on his bed, using gestural or physical prompts only. When the resident had remained on his bed for five consecutive minutes without a disruption the staff member would enter the room and tell the resident he could get up and return to the general activity area.

RELIABILITY: An estimate of the reliability of the application of the procedure was made using an observer-procedure approach. This was accomplished not by using more than one observer, but by comparing the recorded data of the trained staff against the criterion of the program. In this case, the percent of the recorded occurrences which met the minimum time requirement, met the criterion of the definition of the target behaviors, and exceeded the minimum time requirement was calculated. Occurrences which failed to record complete data were included in reliability calculations.

RESULTS: Observer-procedure reliability estimates are shown for the three separate programs and for the three separate measures used to estimate reliability.

	<u>Billy</u>	<u>Mike</u>	<u>Ray</u>
Minimum time	.9361	.9191	.8666
Criterion reason	.9656	.9485	.9333
Greater minimum time	.6388	.3088	.4333

These estimates indicate that the procedure was conducted with an acceptable margin of reliability. The minimum stay of five minutes was required at least .8666 of the time. The reason given for the use of the procedure was acceptable at least .9333 of the time. And, staying longer than five minutes was required at least .3088 of the time.

These results are reflected in anecdotal data. Reports from staff often stated that Mike settled down almost immediately upon being placed in his room (31% of occurrences greater than minimum time), while some concern was aired that Billy spent an inordinate amount of time in his room (64% of occurrences greater than minimum time).

It can be seen in the graphs of each individual's progress (Figure 1) that the use of the required relaxation procedure precipitated a decline in the number of occurrences of the specified target behaviors in each case. The result of each program was to reduce the frequency of the undesired behaviors over baseline. This is true of the average reduction in frequency of occurrences for all residents as well. This progress is further substantiated by anecdotal

data from the staff who were pleased at the boys' improvement.

In the applied setting the control of behavior is of paramount importance. But the amount of time that it takes to gain the desired outcome also weighs heavily. In these programs it can be seen that effective control over Ray occurred almost immediately, a total investment of approximately five and one-half hours over ten weeks. For Billy an investment of about 49 hours over 12 weeks, an average of four hours a week, was required. (The time for Billy may have been reduced if a drug program had not intervened.)

It can also be seen that the amount of time which this program required of a staff member at any one time was not great on the average. Billy required an average of approximately eleven minutes of staff observation time for each use of the procedure. Ray required an average of about eight minutes of staff observation time for each use of the procedure.

Finally, to determine if being put in bed in a bedroom might be a reinforcing event and not responsible for the reduction of the target behaviors, the amount of time it took to get out of the bed and leave the room upon the completion of five minutes of relaxation was recorded on 12 occasions for Billy. The average latency of leaving the room for Billy was 9.5 seconds.

DISCUSSION

The results of these applications of required relaxation demonstrates that the procedure is effective in reducing the frequency of varying behaviors in a wide range of populations.

With respect to the question of whether an extended period of relaxation such as was used by Webster and Azrin is necessary, it seems unlikely that such is the case. The data presented here suggest that a shorter amount of time is sufficient in effecting control. In these results, individuals spent an average of only about ten minutes for each occurrence.

It might be argued that though these individuals spent less time in required relaxation for each occurrence, they were placed into required relaxation more often. Thus, the total amount of time required for the procedure would be equivalent to that required by Webster and Azrin. But it can be seen from the data that very rarely does the average total time per day exceed one hour. In fact, in Ray's case one hour of required relaxation per week is above his norm. Even in the first six weeks of Billy's program, the period of greatest time consumption, the average total time consumed per day was only 54 minutes. This is a great contrast to the two hours required by Webster and Azrin for each application of the procedure.

It thus appears that an extended period of required relaxation, during which no response controls a contingency, is unnecessary. It seems that a brief period of required relaxation that does control a contingency is sufficient. But what is the optimum time period? Foxx and Azrin and Webster and Azrin used 15 minutes. This program successfully utilized five minute periods. To answer this question we must first argue that required relaxation is a special case of time-out.

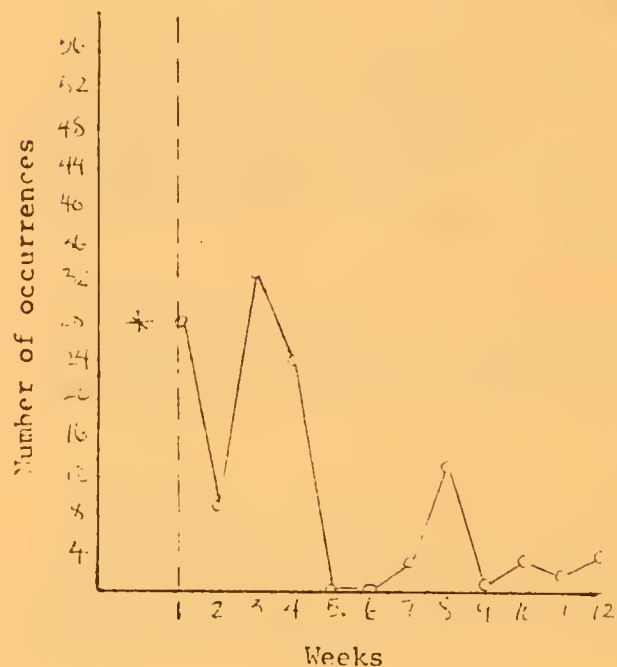
The basic procedure used here and in the other two studies mentioned is the same procedure used in studies of time-out. The sole exception is the specific area in which individuals are placed for a period of time - a small padded box or room or a bedroom. All other aspects of the procedure are similar: the behavior is interrupted, the offender is removed from the immediate situation, the offender is placed in an area in which reinforcers are not readily available, and a period of calm is required before the person is removed from the area. (Foxy and Azrin; Webster and Azrin, Pendergrass, 1971)

It may be intuitively reasoned that placing someone on their bed would be a reinforcing event and the effective variable in reducing behavior that putting someone into a time-out box would be. This argument would have to continue that the simple termination of the undesirable behavior or some other thing was the effective variable.

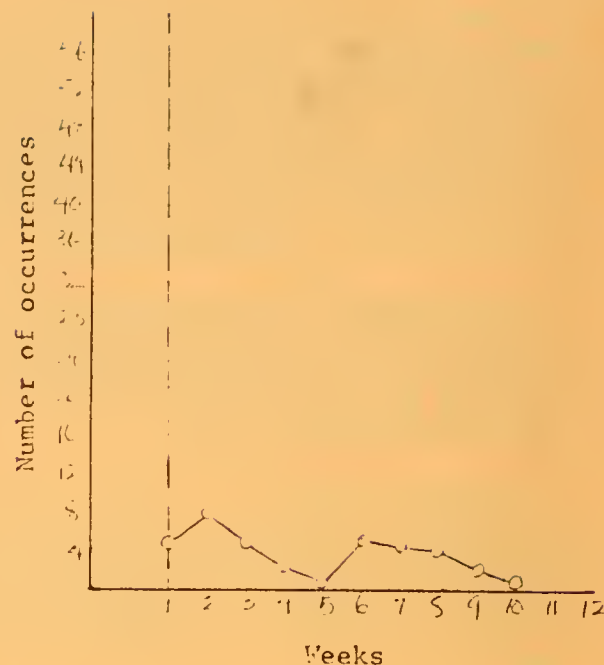
This seems unlikely. If being put on a bed were more reinforcing than being in the area of general activity then an increase in the target behavior would be expected. This did not occur. The individual would be expected to respond in ways which would increase the frequency or duration of the required relaxation session. The data show, however, that average time per session did not increase substantially, and latencies for leaving the room were no longer than 9.5 seconds.

It is the author's conclusion that required relaxation can be considered a sub class of time-out. If this is true, then research conducted by White, Neilsen, and Johnson (1972) would apply. They found that moderate durations of time-out are optimal but qualified their remarks. They found that if durations of time-out were changed, accelerating the duration enhanced the effect and reducing the duration lessened the effect. This led them to conclude that the best approach was to begin at a low duration and increase the duration if data indicate a need. The authors endorse this approach for required relaxation as a good empirical approach.

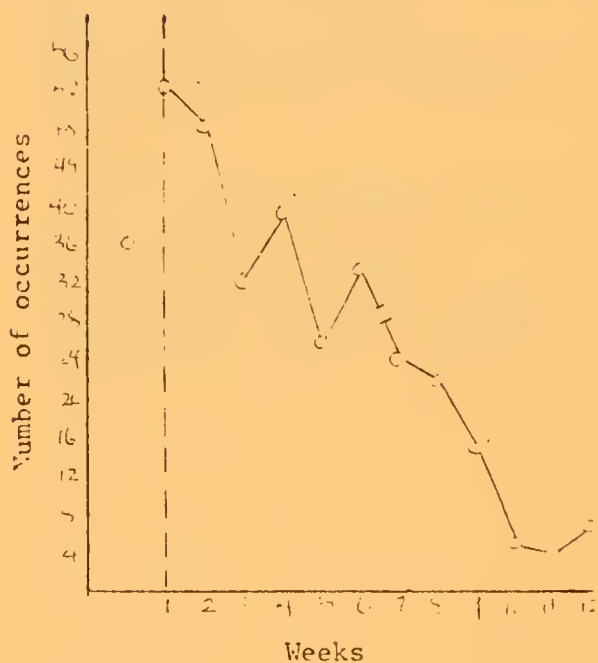
In summary, it is concluded that required relaxation or quiet training as described by Foxy and Azrin (1972) and Webster and Azrin (1973), is a special case of time-out. Further, it is concluded that the research of White, Neilsen, and Johnson (1972) applies to required relaxation and that moderate durations of required relaxation are optimum. Extended periods of required relaxation are unnecessary.



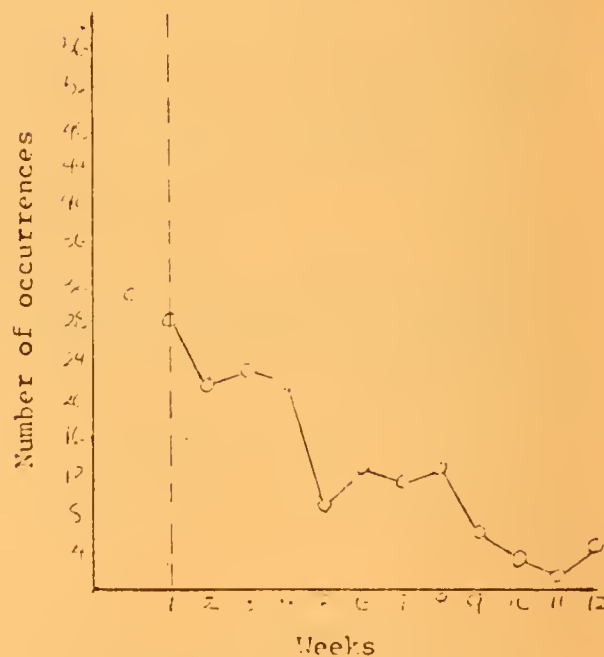
MIKE



RAY



BILLY



AVERAGE THROUGH 12 WEEKS

Figure: Weekly averages of number of occurrences of the target behaviors for each resident and the average for all programs.

* Baseline data missing; estimated number of occurrences.

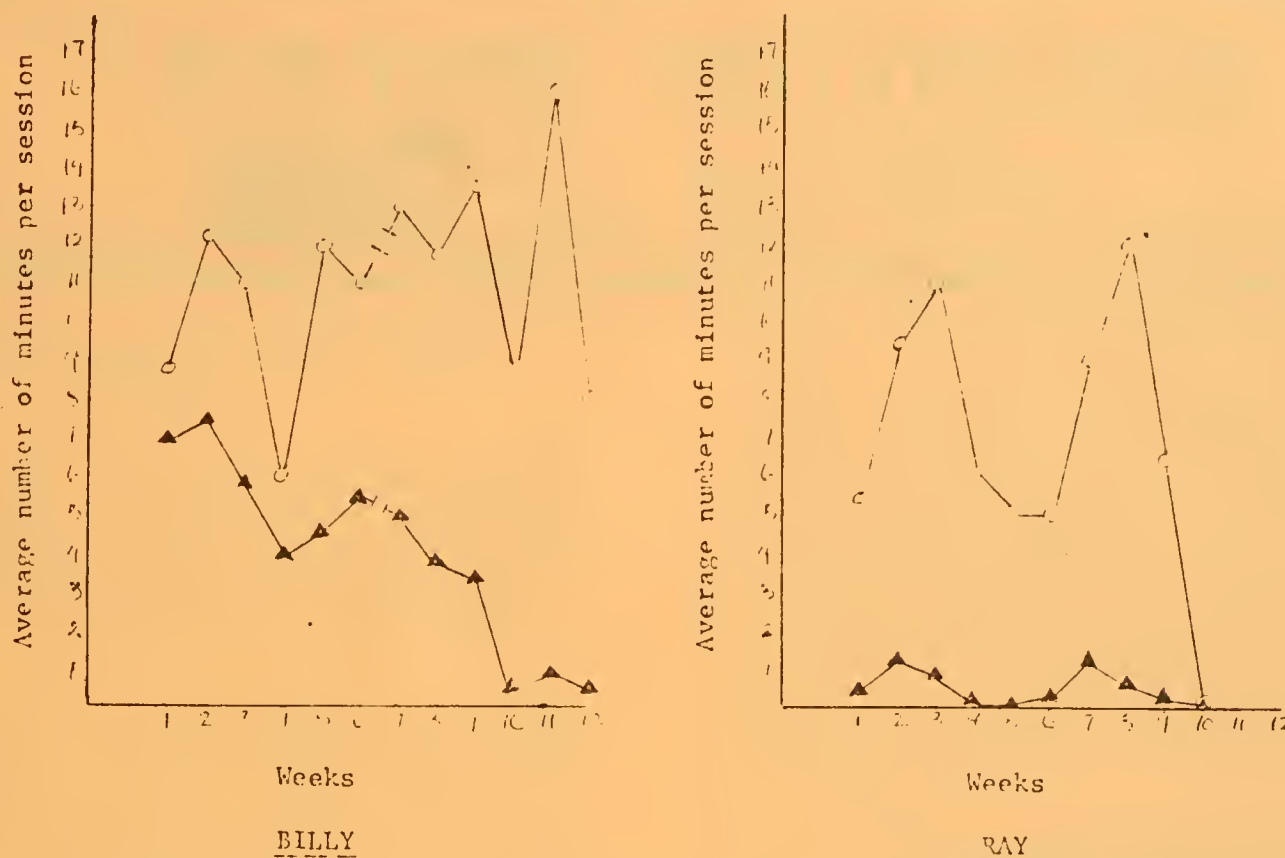


Figure 2: Average number of minutes per session and total hours of procedure for each week.

O average minutes per session

▲ total hours per week spent in required relaxation

— break in program caused by medication problem

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THE BOULDER BEHAVIORIST

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STATE DOCUMENTS

APR 26 1976

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MORE ON TEACHING RESEARCH CONTRACT

by Ron Langworthy,
Training Liaison

The previous issue of the Boulder Behaviorist introduced readers to the contract between BRS&H and Teaching Research of Monmouth, Oregon. In this issue I'd like to point out more specific activities set in motion by the contract.

The most important function of the contract is to provide BRS&H with the added expertise necessary to transform a custodial institution into a training center. Few people appreciate the monumental scope of this task. One of the main differences between a custodial institution and a training center is that direct care, front line staff in the latter must be capable of implementing and maintaining the habilitative effort. Further, it is clear that the habilitative effort must be successful; that is, the residents must show measurable progress.

Thus the chief problem becomes how to train as quickly and effectively as possible some 265 direct care workers now at BRS&H. In order for each resident to receive a minimum amount of progress-oriented training each day, all direct care workers must receive intensive training.

BRS&H's approach to the above problem has been for Staff Development, in conjunction with Teaching Research staff, to establish a training center. In the next 28 months all direct care staff will move through this center. They will receive training in the basic behavioral approach in a data-based classroom (see A Data Based Classroom by H.D. Bud Fredericks et. al., 1975). Four Staff Development teachers train 8 employees per week.

Mornings in the training center see the trainees in a classroom setting working directly with 8-12 students representing a wide range of handicapping conditions and levels. Trainees learn two basic skills. Perhaps the easiest is one-on-one, structured programming (objective #2 below) in the four major skill areas—self help, language, motor development and cognitive. The more difficult skill seems to be group programming in an "activity area," (objective #4 below) engaging 4-6 students in activities that are less structured yet more complex for the teacher.

In the afternoons the trainees watch video tapes of their performance, participate in lecture-discussions and work on assignments designed for objectives #3,5,6 and 8 below.

Objectives for trainees in staff development training center

1. Trainees will be able to define the following terms with 90% accuracy:

backward chaining	posttest
baseline	pretest
behavior	primary reinforcers
behavioral objectives	probe
consequences	reverse chaining
criterion	self reinforcement
cue	shaping
fading	social reinforcers
positive reinforcement	time out
	token economy

2. Trainee will be able to conduct programs with students in the areas of self-help, motor development, cognitive, and language, employing 90% precision in the presentation of cues, delivery of consequences, and recording

of data.

3. Trainees will be able to update existing programs based on data collected during teaching sessions. Possible updating decisions include change of reinforcer, probe, branch, or no change. The criterion is 90% correct.

4. Trainees will demonstrate the ability to manage the activity area. This will include the implementation of behavior change programs, supervision of free time activities, conducting stimulation programs, supervising seat work when applicable, and conducting group programs. The criterion is 90% appropriate delivery of cues and consequences.

5. Trainees will be instructed in the following behavioral management techniques:

- a. define an inappropriate behavior
- b. record baseline data on the inappropriate behavior.
- c. design and write a program to alter the inappropriate behavior.

6. Trainees will be able to demonstrate the following techniques:

- a. pretest a student in the curriculum and place him appropriately on programs
- b. prepare a complete clipboard for a student in curriculum areas based on pretest data. Preparation will include cover sheet, reinforcement file, language sheet, program cover sheet and data sheets.

7. Trainees will utilize observation forms to evaluate activity aide and teacher behavior in the delivery of cues, consequences, and data collection with 90% reliability.

8. Trainees will demonstrate the ability to graph, using the percent correct method. The criterion is 90% correct.

The Cottage Supervisors and Habilitation Aide IV's (program supervisors with responsibility for job training and many aspects of habilitative effort) and the people to go through the center. When staff in these two key positions, plus about eight from physical therapy, occupational therapy and Title I finish training, the center will start training one cottage at a time. Once all direct care employees in the cottage cycle through, the training center staff will then spend several weeks in the cottage, engaged in problem solving and adapting the classroom situation to the cottage.

Some cottages are not scheduled to cycle through the training center for another year or longer even though the Cottage Supervisors and HA IV's have gone through the training center. For these cottages, a list of objectives will be developed, specifying action plans and time lines to gear up the training effort while cottages higher on the sequence receive direct intervention. It may be that cottages further down on the sequence of cottage intervention can prepare for intervention so completely as to obviate the need for it.

On April 16th the training center finished Phase IV of the contract with Teaching Research, which is to train Cottage Supervisors and HA IV's. On April 26th the lengthy phase V will begin - cycling HA I's, II's and III's through the training center cottage by cottage. The process may be slow and arduous but worth it if major changes and improvement can be shown.

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STATE AND FEDERAL REGULATIONS
REQUIRE BEHAVIORAL OBJECTIVES

by Margaret MacDonald,

Editor

Brush-Up and Spot Check

An examination of current state and federal regulations applicable to BRS&H reveals the importance of behaviorally stated objectives for training programs and habilitation plans. This means writing observable objectives that can be measured, such as "feed himself with a spoon," as opposed to vague, unmeasurable statements like "function to the best of his ability."

Below is a survey of what the standards actually say:

*The standards for intermediate care facility services in institutions for the mentally retarded (ICF/MR) by the Department of Health, Education, and Welfare state: "There shall be written training and habilitation objectives for each resident that are: . . . (B) Stated in specific behavioral terms that permit the progress of the individual to be assessed."

*The Summary of Final Regulations on Intermediate Care Facility Services prepared by the staff of the National Association of Coordinators of State Programs for the Mentally Retarded includes in its definition of the term active treatment: "An individual 'plan of care' which is a written plan setting forth measurable goals or behaviorally stated objectives."

*The Developmentally Disabled Assistance and Bill of Rights Act requires the development of an evaluation system that shall "provide objective measures of the developmental progress of persons with developmental disabilities using data obtained from individualized habilitation plans..."

*Montana's Senate Bill 388 states: "One professional person shall be responsible for supervising the implementation of the habilitation plan, integrating the various aspects of the habilitation program, and recording the resident's progress as measured by objective indicators."

EVALUATION OF LIVING ENVIRONMENTS:
ASSESSING THE QUALITY OF THE THERAPEUTIC
ENVIRONMENTS FOR THE RETARDED

by Roy Holmstrom,

Training Officer 1

The resident who experiences a "quality environment" has a better chance at attaining the objective of "normalization," which is, for all intents and purposes, our goal. One indicator of a quality institution is the quality of the residents' daily experience in that environment. But how does one assess the living environment and draw conclusions about the relative merit and therapeutic aspects of these environments? A technique is required which will empirically measure environmental conditions and identify those variables which affect environmental quality.

In addition, such a tool must be flexible enough to measure the "treatment effect" of various environmental interventions and accommodate the differences between cottages as well. Available

standardized tests such as the Stanford-Binet, the Vineland Social Maturity Scale, and AAMD Adaptive Behavior Scales show performance in specific testing situations or rely on second-hand information and reveal little of the environmental conditions residents are confronted with daily.

Todd Risley and M.F. Cataldo (1974) have developed a tool called the "Resident Activity Manifest" which measures environmental effects on a resident population. The Manifest contains three mutually exclusive categories: 1) "stimulation" which provides information concerning what the resident is experiencing, 2) "interaction" which provides information concerning what the resident is doing, and 3) "activity" which provides information concerning resident participation in organized activities. It was important that each category be sensitive to different aspects of the environment and also to allow comparisons between categories.

A manifest scale similar to Cataldo and Risley's is being developed at BRS&H. Our manifest scale consists of twelve categories designed to measure scheduled program activities, peer interaction, staff interaction, environmental engagement, isolation (either active or passive), aggression, environmental disruption, stereotypic behavior, vocalization, language/communication, and object manipulation.

Each of the above measures are sensitive to a different aspect of the environment or resident behavior and allow for comparisons between categories and cottages.

An attempt was made to select residents who were representative of their cottage. They were assessed during time periods which were randomly determined by drawing 15 minute time slots throughout the working day. The momentary time sampling technique was used to observe the residents and the environment.

Each resident selected was observed 10 times on a given day and evaluated in terms of all 12 categories during each observation. Ten individuals from the same cottage were evaluated on the same day, yielding a total of 1200 pieces of information on the cottage environment and resident behavior on a given day. Reliability testing using three different techniques demonstrated an average of 94-95% reliability.

One instance in which manifest data has already been useful is the toy rotation study being done by Tom Seekins, Title I Coordinator/Supervisor. Manifest data were taken on residents in Cottage 14 for three days before the introduction of new toys into the cottage and for three days after their introduction. A comparison of the level of several manifest categories follows:

	Object manipulation \bar{X}	Stereotypic behavior \bar{X}	Staff social interaction \bar{X}
BEFORE NEW TOYS	32%	32%	16%
AFTER NEW TOYS	51%	25%	22%

Seekins will make a full report on these findings at the Midwestern Association of Behavior Analysis in Chicago May 1st and in the Boulder Behaviorist at a later date.

Designed to measure qualitative aspects of the environment and behavior, the scale has much potential in determining correlations between the two and in guiding the way in designing environments to enhance adaptive behaviors.

ERROR OF OMISSION

Pat Dion and Jan Mackay should have been included as authors of the article "Control of Undesirable Behavior: The Use of Brief Periods of Required Relaxation to Reduce the Frequency of Undesirable Behaviors" that was featured in the Boulder Behaviorist Supplement of February 26.

U OF M's HOREJSI PREPARES REPORTS ON DEINSTITUTIONALIZATION

For several months the following two reports have been available in the building 8 Habilitation Library: "Deinstitutionalization and the Development of Community Based Services for the Mentally Retarded: An Overview of Concepts and Issues" prepared by Charles Horejsi and "Deinstitutionalization and the Development of Community Based Services for the Mentally Retarded Youth of Western Montana", prepared by Charles Horejsi and Ann Berkley. The reports are based on information gathered from September 1, 1974 to August 31, 1975 by the staff of the Project on Community Resources and Deinstitutionalization, Department of Social Work, University of Montana, Missoula, Montana 59801. They have been written for a nonprofessional audience and are intended to be of use to "parent groups, service providers, program planners, and others in Montana who are concerned with the

creation and expansion of community based services." The latter report includes 23 pages of recommendations. The Boulder Behaviorist urges the widest possible audience for these reports. In addition the B.B. would like to congratulate Dr. Horejsi and his staff for producing these factual, objective and lucid reports which will be highly important to people interested in mental retardation in this state for years to come.

DATA SHOWS TRAINING ON INCREASE

Following is a table which represents monthly averages of several measures which the BRS&H Data Analysis Lab (DAL) reports weekly. "Percent of residents in programs" represents residents who are served by any of the following areas: Cottage staff, physical therapy/occupational therapy, Title I, school, speech and hearing, foster grandparents and deaf/blind. The table shows that the overall average number of residents in programs has increased from 69.9% in December of last year to 88.7% in March of this year. In fact, for the week beginning March 29th the percent of residents in programs had risen to 96.8%. The "percent of staff doing training" refers to the proportion of cottage staff, the Habilitation Aides, who are regularly running at least one program. This percentage has also increased, from 24.5% in December to 38.2% in March. "Percent of staff hours training" refers to the proportion of staff hours spent doing training out of an eight-hour shift. This percentage in March approximated that of December's even though it had fluctuated some in the months between. "Percent of optimal program hours" reflects the degree to which the institution's goal of providing three hours per day of programming per resident is being met. This includes both the services of cottage staff and auxiliary service areas. This has increased substantially from 23.8% in December to 43.6% as of last month. The "mean per-

centage of goal attainment" is the mean of the preceding four columns and is a general measure of the degree to which the goals of the training effort are being accomplished. This measure has risen from 33.3% in December to 46.2% in March.

These data indicate that over the last four months, more residents are receiving training and that more

cottage staff are involved in delivering this training.

The fact that "percent of staff hours training" has not correspondingly increased is probably due to the fact that with more direct care staff employed, more training can be accomplished without individual employees spending a larger proportion of their time doing so.

	<u>Dec. '75</u>	<u>Jan. '76</u>	<u>Feb. '76</u>	<u>Mar. '76</u>
Percent of residents in programs	69.87	69.86	83.97	88.69
Percent of staff doing training	24.47	24.51	27.12	38.16
Percent of staff hours training	14.65	10.93	16.19	14.56
Percent of optimal program hours	23.81	30.93	43.27	43.55
Mean percent of goal attainment	33.32	32.93	42.64	46.24

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THE BOULDER BEHAVIORIST

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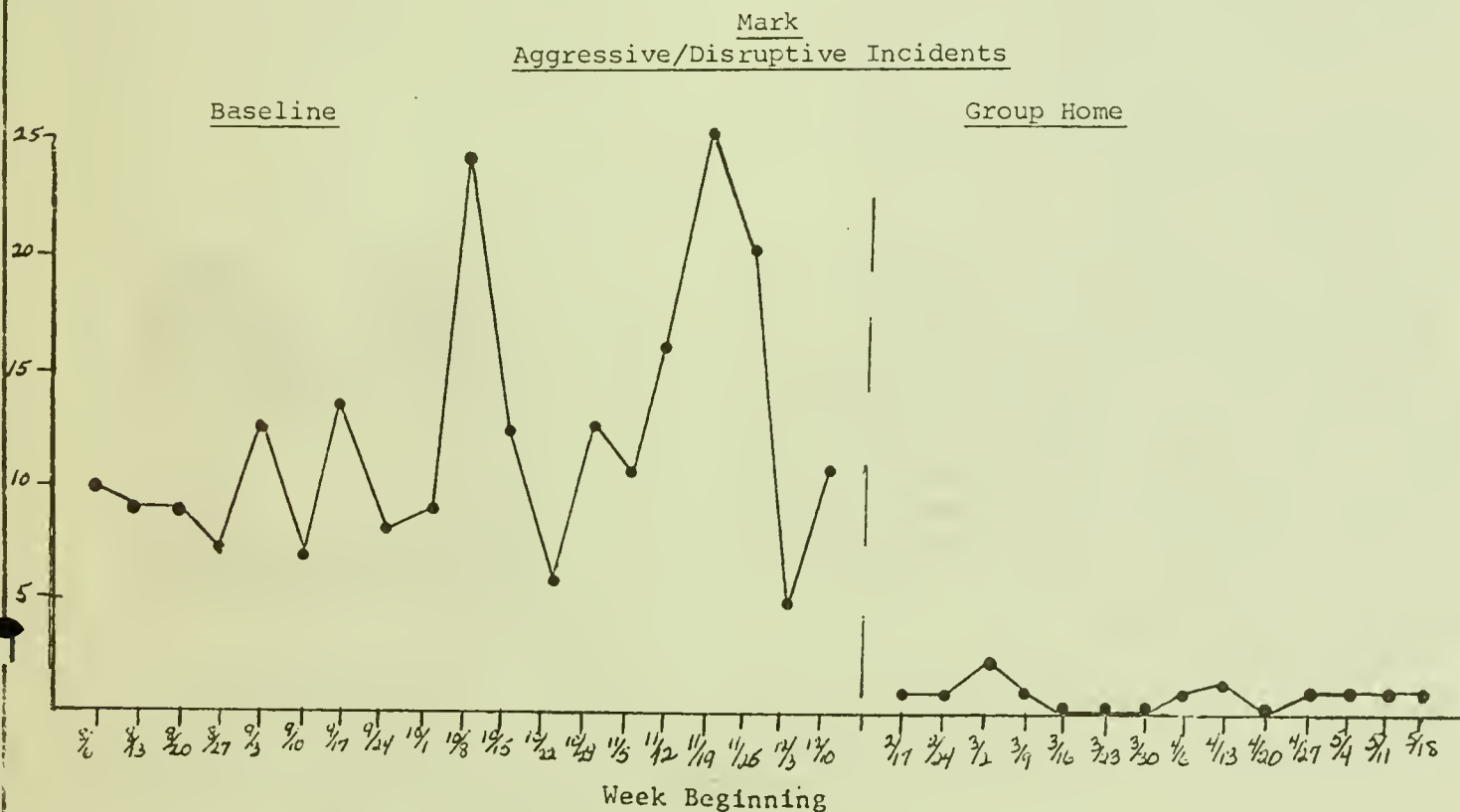
May 24, 1976

GROUP HOME CHANGES MARK'S LIFE

Mark B. is a 20 year old male who has been institutionalized at BRS&H for 12 years. For the past 4 or 5 years, he has had a notorious reputation for being a trouble-maker. Specifically, Mark was known for his terrible temper tantrums during which he would run around screaming, throwing chairs, flipping beds, kicking, biting and hitting others. M. L. O'Hara, supervisor of Mark's former cottage, says it would often take three or four people to stop him. Leather wrist shackles were used initially but with poor success. Mark would remove the mattress from his bed and pound his head and hands on the springs. A padded time-out box was an improvement; he was calmer in it and couldn't hurt himself. But these measures had little effect on his behavior. HA II Brian Garrity, who used to work in Mark's

former cottage, described Mark as the problem of both cottages two and four when he lived there. Many things were tried half-heartedly. Garrity says he thinks "It may have been impossible to have consistently implemented a program on someone who is one of 50 other residents in a cottage and to coordinate it with 25 other staff members who worked different shifts. But considering the situation, we made the best attempt we could."

For the past 12 weeks, Mark has lived in BRS&H's new group home, a 24 hour training facility for residents with histories of severe behavior problems. The following graph shows the decrease in the frequency of Mark's disruptive behavior over the past 12 weeks as compared to a 19 week baseline period.



During the past 12 weeks, Mark has had a total of 11 temper tantrums - about the same as he formerly averaged in only one week. Mark threw what HA IV Greg Ragee described as his worst tantrum on his first day in the group home. This tantrum, like subsequent ones, was consequated by an overcorrection procedure which requires staff to physically restrain Mark until he has quieted for a period of three minutes. Then he is required to restore the environment to its original state and practice using misused objects in the proper way. For example, after shoving chairs around, stripping his clothes and ripping apart his bed, he was required to straighten the living room furniture, dress himself and make his bed. This overcorrection procedure is repeated for about 60 minutes.

Mark's decrease in throwing tantrums in the group home is especially significant because the group home's definition of a tantrum involves a milder version than the one used in Mark's former cottage and more is demanded of him now. Furthermore, Mark's level of tranquilizing medication (Serentil) has been lowered from 75 mg. to 10 mg. three times daily because the group home staff felt that he was too drowsy (the 10 mg. is needed to control Mark's ulcer). Garrity, currently a staff member in the group home, describes Mark as being more independent than he used to be. "He just does more on his own. Before, everything was done for him because it was easier, faster. Now he even looks better and healthier," Garrity says.

The group home staff provides Mark with about 3½ hours of formal training per day in such activities as bedmaking, tablemanners, toothbrushing, shoe lacing, table setting and clearing, dish washing and drying, language acquisition, object manipulation and bathing. Mark also spends programmed time daily in the prevocational workshop and in the gym. The group home staff keeps Mark pretty busy the rest of the time with incidental kinds of learning activities such as working on puzzles, shopping, picnics and going for rides.

To single out one factor to account for the improvement in Mark's behavior is impossible

since there have been many new variables in his life since moving to the group home. He experiences a consistently enforced overcorrection; ro-
[redacted] lasts 60 minutes following a tantrum. He receives much personal attention from staff throughout the day during both formal programming and informal activities. Greg Ragee believes that "It's not just the extra programming or the overcorrection procedure that has changed Mark's behavior; it's the combination plus the DRO* he receives all day. He gets reinforced for other things than having a tantrum now."

Although the group home project has been in operation for only three months, the preliminary data look very encouraging. Assistant Administrator of Community Services Timothy Plaska reported that, "Both the frequency and intensity of disruptive behaviors have been decreasing, the staff has been able to reduce the frequency of self-abusive behaviors, and the number of individual programs regularly conducted has increased significantly. Also, we've observed

*Differential reinforcement for other behaviors



HA II Linda Sever
working with Mark

that the health and general appearance of each resident has improved and all of the residents are now completing many more tasks independently."

Plaska also noted: "The project would be nothing without the staff we have. They're devoting a tremendous amount of energy to differentially reinforcing appropriate behaviors throughout their shift and are consistently consequenceing any maladaptive behaviors which occur. It is their effort which is responsible for the effects we're seeing."

ELECTRICAL STIMULATION AS PUNISHMENT: A REVIEW

by Ron Madsen

Habilitation Aide IV

In our efforts to prepare the residents of BRS&H for community placement we must be concerned not only with training living skills but also with eliminating socially unacceptable or maladaptive behavior patterns. Punishment (defined as a consequence of behavior that reduces the future probability of that behavior) applied contingently upon some unacceptable target behavior remains a subject of intense controversy. Advocates and opponents offer some very convincing arguments to support their own viewpoint.

Before experiencing the range of maladaptive behaviors exhibited in an institutional setting, I held the opinion that punishment was unacceptable under any circumstances. However, after working several months at BRS&H it became obvious to me that the effectiveness of time-out rooms and required

relaxation was limited. Just as it is necessary to choose an effective positive reinforcer for consequenceing of adaptive behavior, it is equally important to identify and implement punishing consequences that do indeed decrease the frequency of the target maladaptive behaviors. It was in this light that I began to examine the literature on punishment techniques.

I have selected two articles from the Journal of Applied Behavior Analysis as a representative sample of the current research being conducted on this topic. The term "electric shock" as used in this review refers to electrical stimulation of the skin of the forearm or leg with a device manufactured expressly for this purpose (Hot Shot Products, Inc.). There is no similarity between electric shock used as punishment and electroconvulsive shock therapy (the latter involves passing an electric current through the brain).

Kohlenberg, Robert J., University of Washington. "The punishment of persistent vomiting: a case study." JABA, Vol. 3, 1970. Pg. 241-245.

Subject and Background

A behavior contingent punishment study conducted at the University of Washington involved a severely retarded 21-year-old female. She self-initiated abdominal contractions which led to vomiting after every meal. Her deteriorating physical condition (58.5" tall and 74 lbs.) forced doctors to consult a psychologist who implemented a punishment program.

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Procedure and Results

Weight of emitted vomitus and number of stomach tensions were baselined. Punishment contingent upon stomach tension (electric shock - Hot Shot Products) was begun on the second day of observation, mid-way through lunch. The resultant decrease in emitted vomitus and stomach contractions was dramatic. Both fell to nearly zero by the end of the 80 minute feeding interval. The program eliminated the health hazard as evidenced by a 10.5 lb. weight gain in 25 days.

This program was continued on an informal basis for five months and then discontinued. Vomiting remained at a low level and weight gains continued for ten months. However, one year following treatment, vomiting again became a problem. The author indicated that a maintenance program using occasional electric shocks may be required.

Lovaas, O. Ivar and Simmons, James Q., M.D., University of California. Los Angeles. "Manipulation of self-destruction in three retarded children," JABA, Vol. 2, No. 3, Fall, 1969. Pp. 143 - 157.

Subject and Background

A study conducted at UCLA compared the efficiency of an extinction procedure with electric shock in the reduction of self-destructive behavior in three severely retarded subjects.

Procedure and Results

During the extinction phase, one of the subjects (a male, 8 years old) exhibited 2750 self-destructive acts in the first 1½ hour. He hit himself almost 9000 times before he quit. The most interesting (and disturbing) feature of the extinction data is the highly situational nature of effectiveness. The self-destructive behavior

fell to zero in the room used for extinction but remained unaffected in other situations. This indicates that the subject must undergo extinction in a variety of environmental situations.

When it was observed that the extinction did not generalize to another room, the subject (same highly self-destructive male mentioned earlier) was placed on an electric shock (Hot Shot) punishment program. A total of twelve contingent shocks over four sessions were required to eliminate the behavior. Again generalization effects were watched. Suppression of self-destructive acts did not generalize to experimenters who had not previously administered shocks nor did generalization occur to different rooms. An interesting observation pertained to effects on behaviors that were not consequated. As the rate of self-destruction decreased, the subject avoided the experimenter less and also whined less. The observed side effects of punishment were desirable.

Similar conditions and results were observed for the other two subjects (the female was not allowed extinction trials because she could have inflicted serious injury or killed herself during the run).

Conclusions

Electric shock punishment is, on the surface, a very tempting behavior control tool. The shock intensity may be precisely controlled and it is close to being a universally aversive stimulus for humans. When applied correctly it is very effective in eliminating the target behavior over very few trials. In fact, the suppression of the maladaptive target behavior is so abrupt that one tends to accept the procedure immediately without bothering to examine its long range effective-

ness. The therapist is immediately reinforced by the striking improvement in his client and often fails to view the results in an objective manner.

When properly evaluated in a controlled setting there is every indication that electric shock as punishment acts only as a temporary suppressant of behavior. This suppression does not generalize to different environments, nor does the suppression continue when the person who applied the shock is absent. However, in severe cases of self-destructive behavior it may be the only tool available to suppress the behavior long enough to condition other adaptive responses. This is a valid "last resort" application of electric shock.

Punishment is used as a behavior modification tool only when all other techniques have failed. This rule has developed because in the typical environment of applied behavior analysis (schools, prisons, mental institutions) the subjects have no counter-control over the experimenters; and consequently punishment is very easy to apply inappropriately without fear of retaliation. B.F. Skinner has pointed out that many problems in our daily existence result from over-dependence upon the use of punishment to control unwanted forms of behavior. We use punishment too frequently out in the real world - let's try other approaches in our formal attempts to help the residents.

EMG TRIGGERED LANGUAGE BOARD

by George Siverts

Instrumentation Specialist

Residents with multiple physical handicaps sometimes find it difficult to communicate because they do not have physical responses in their repertoire which are easy to recog-

nize. To help overcome this, an EMG language board was developed at BRS&H. The board consists of an EMG monitor and a plexiglass tray with five lights mounted in a row across the top. For operation electrodes are placed over a muscle which the resident can voluntarily control and the lights are illuminated in a timed sequence. When a sufficient EMG signal is detected, the lighting sequence stops, leaving one selected light on. If different stimulus materials are placed near the lights, the resident can select one of them by merely tensing a muscle. These materials can be answers to a question the trainer asks verbally, matching to sample, or pictures of various objects the student is learning to identify. Overall cost of the unit is about \$150. More details, including circuit diagrams can be obtained by writing me at Boulder River School and Hospital.

KANIES, SEEKINS, THOMPSON PRESENT PAPERS AT MABA

Three BRS&H staff presented papers at the Midwestern Association of Behavior Analysis in Chicago May 1-4th. Tom Seekins, Coordinator/Supervisor of Title I, presented a paper on "The Interaction between Drugs and Contingency Management Programs: The Effects of Phenobarbital on the Frequency of Occurrence of Two Responses in a Response Class Consequated by Required Relaxation." In it Seekins described how a young, profoundly retarded male was placed on a program of required relaxation to decrease the frequency of aggressive disruptive behaviors--throwing objects at others and striking others with limbs or objects as weapons. Over a period of seven weeks the program affected a marked reduction of throwing while striking others decreased slightly. During five of the seven weeks the two responses changed in the same direction. At the beginning of the eighth week

the prescribed dosage of phenobarbital for seizure control was doubled. A helix effect was noted following the drug change, with the response of low initial value (striking) increasing and the response of high initial value (throwing) continuing to decrease and then increasing. After five weeks of continuing the program a reversal was attempted by returning to the previous medication level as it did not appear that the contingencies would regain control, nor did the frequency of seizures appear altered. The frequency of both behaviors rapidly decreased to levels comparable to those before the increase in medication and continued to decrease; the contingencies appeared to regain control. These results are discussed in terms of the paucity of literature in applied behavior analysis journals dealing with the relationship between drugs and contingency management programs. The use of behavioral measures as an adjunct in the medical determination of prescribed drug levels for seizure control is also discussed.

Seekins also presented a paper on "Environmental Design as a Treatment Mode for the Profoundly Retarded: A Technology of Environmental Enrichment" in which he described an attempt to design a learning and treatment environment in a residential cottage for 18 young, profoundly retarded children. The goals of the project were: to provide a physical environment which was personalized and normalized as much as possible, to increase the frequency and duration of interactions of the residents with their physical environment, to foster learning experiences, reduce stereotypic behaviors, to provide an environment dense in reinforcement from which residents could be removed for purposes of time-out to increase the varied uses of space and its contents, and to develop and use measurement/assessment procedures. The first steps of the enrichment project were to increase from an initial low level the number of items available for manipulation by the residents and to increase the amount of space available to the residents. Meas-

urements were taken to determine the quality of the environments. Three manipulations were then performed to determine the effects of the enrichment procedures and to determine techniques by which the goals of the project could be fostered and enhanced. The first manipulation suggested that the use of objects decreased over time of exposure and that the presence of objects influenced the occupation of space. A second manipulation replicated and expanded the finding that the use of objects declines through time. A third manipulation was aimed at affecting the use of various areas in the cottage and was partially successful. The result of these manipulations are discussed in terms of environmental design in treatment facilities.

Program Evaluator Marion Thompson and former BRS&H employee Roger Ogren presented a paper on "Improving Institutional Service Delivery: the Role of a Central Reporting System" in which they describe the centralized service reporting system which tracks training and therapeutic efforts within eight separate departments at BRS&H. The system serves not only as an efficient channel for the collection and dissemination of service related information, but, more importantly, provides the basis of a management structure supportive of the entire service delivery effort within the institution.

Their presentation described how the system is being used to provide feedback on selected variables to upper and middle management in order to increase the quantity of services provided to each resident. During the course of the present study the number of residents consistently receiving habilitative services rose from 54% to 97% while the mean number of hours spent in habilitative activities per resident rose from less than half an hour to more than an hour per day. These gains were realized as a result of increased emphasis upon the therapeutic role of the direct care worker as shown by substantial gains both in number of employees involved in program-

matic activities and in the mean number of hours spent per employee per day in structured interaction with residents.

Individualized Habilitation Plan Coordinator Steve Kanies presented a paper on "Evaluation of Living Environments: Assessing the Quality of Institutional Living and Treatment Environments" in which he discussed the need for data resulting from the experimental analysis of institutional living environments and presented two variations of the Cataldo-Risley Manifest, developed at BRS&H for evaluating "quality" related parameters of living environments. In one procedure developed by Tom Seekins and the Title I project, a momentary time sampling is used to identify in each of the information categories what a particular individual is doing at the particular moment of observation. Data is gathered as to whether the individual is involved in a scheduled program activity, social interaction with peers or staff, environmental engagement, isolated behaviors either active or passive, aggression, environmental disruption, stereotypic behaviors, vocalization, object manipulation, or is using some language or communication system. Reliability of 95% has been obtained using this procedure and it is currently being used by the Title I project to evaluate BRS&H living environments.

The other procedure, developed by Kanies, looks at a specific geographical portion of the living environment and records specific information about that area, i.e., number of residents in area, coded notation of the location of each resident

not in the cottage, number of individuals in the observation area, number passive, and number of staff on duty and those in the area. Observation is then made of all individuals in the "observation area" for a specific time sample and frequency data recorded as to the number of positive staff-resident interactions, number of negative interactions (verbal or physical abuse or noncontingent reinforcement) and frequency of aggressive, disruptive, stereotypic and self-abusive behaviors. Reliability of 89% has been obtained using this procedure.

The three who attended MABA reported that it was a great experience. Thompson felt that the quality of presentations continues to improve and was particularly impressed by the sessions on industrial applications of behavioral technology. He noted that, "There seems to be more emphasis on applied projects rather than on one subject demonstration studies." A unique feature of the MABA convention was a "show and tell" or "mudpie" area where people could display anything they wished. Seekins observed some trends; he noted that, "The organization is becoming formal and may possibly become a national organization. Of the three organizations (APA, AABT), MABA's membership seems to be most interested in some degree of certification of behavior therapists."

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COTTAGE 3 IMPLEMENTS SUCCESSFUL WEIGHT LOSS PROGRAM

In 3½ months cottage 3 resident Ray L. has lost 22 pounds. When a weight loss program was initiated with 5 foot, ¼ inch Ray on March 20, he weighed 318 pounds, a condition that has been attributed to Prader-Willi syndrome. Ray was placed on a carefully monitored 800 calorie diet; target behaviors were defined as stealing or eating food not provided for by his diet. Ray had a long history of food stealing, hiding and eating. To these ends he had repeatedly demonstrated much ingenuity; he had even been known to hide food in the folds of his skin!

Ray's program specifies that if an entire day passes during which Ray is not observed to steal, possess or eat food prohibited by his diet, he is rewarded in the evening with a cup of flavored yogurt and lavish praise. If any of the target behaviors are observed, any food remaining in his possession is taken from him. He is taken to his bed and seated in front of the aide implementing the procedure. Ray is prompted to admit his offense and then spends 30 minutes in an overcorrection procedure. This consists of eliciting various forms of verbal apologies from Ray. The actual dialogue varies each time but the general format includes questioning Ray, "Do you know you're not supposed to steal? Are you sorry? Say you're sorry three times. Will you ever do it again?" Following the apology session Ray is told that because of what he has done, his pipe will be taken away for a day and his yogurt privilege suspended that evening.

If a tantrum occurs anytime during the procedure, the room is cleared of any

observers and attention to Ray is withdrawn. He is prevented from damaging the room should he begin doing so. When the violence subsides, an aide is posted outside until Ray has stopped crying. Then the overcorrection procedure is reinstated.

Supervisor of cottage 3 Joe Douglas attributes the success of Ray's program to the cottage 3 staff. "This is probably the most consistently implemented program in the cottage," Douglas commented. Furthermore, Ray chose his own reinforcer, the yogurt. Smoking a pipe is also one of Ray's great loves so its withdrawal for a day is a powerful punisher. Ray has received a lot of social reinforcement from others; everytime Ray steps on a scale and his weight has dropped, he gets a big cheer from onlookers. Ray himself is quite proud of his own success. When asked for a comment about his program, Ray said, "It feels good to lose weight."

Ray has had 67 "good" days out of 81 total days on the program.

Even though this program has reaped results, HA IV Pat Friman reports that improvements are being sought. The staff anticipates using contracts with Ray and changing the overcorrection procedure from an apology to an exercise session.

It is interesting to note that this behavioral program appears to be successful in changing a characteristic associated with a syndrome which supposedly has a physiological basis for the behavioral disorder - overeating. If any of our readers has had experience with similar projects and would be willing to share this information, please write the editor.

A COMPARISON OF TWO TRAINING APPROACHES:
TR (TEACHING RESEARCH) AND BR (BOULDER
RIVER)

by Ron Langworthy
Training Liaison

Last February, having been exposed to a week of training in the TR method, a group of BRS&H employees were asked to come up with a method to use at BRS&H to train to all the direct care staff, most support services staff and many administrative personnel. Each one in the group had had a hand in developing the previous BR method, so there existed a great deal of a priori preference for that method. They could choose either one method or the other or work out some compromise. After a week of often agonizing debate, the group chose basically the entire TR method, with the understanding that many changes in the method would occur as it was adapted to BRS&H needs.

The teaching method ascribed here to TR has been in the development for 10 years. The BR method developed for four years in the Title I project. While TR created a method and a means of disseminating it throughout the U.S., the BR method has always been the practice of a small group of people. The BR method has had a wide audience across the U.S. and Canada and a few other foreign countries through publications such as the Boulder Behaviorist, the Program Procedures Manual (Langworthy et al, 1974) and Training Guidelines (Seekins et al, 1975). The PPM is the best written definition of the BR method, though it is now over two years old and understandably out of date for BRS&H purposes. Teaching Research's definitive publication is A Data Based Classroom (Fredricks et al, 1975).

Since the two most characteristic traits of both systems are a data base and a behavioral emphasis, the similarities are bound to vastly outweigh the differences. The core activity of both approaches is the cue-behavior-consequence (cbc) sequence. This sequence produces the results; all the rest of

the defining aspects of both approaches serve to increase the effectiveness of that sequence as it is applied to a given resident. So proficiency scales, clipboards, pretests, maintenance checks, reinforcer samples, procedure manuals, glossaries of terms, data sheets, base-lines, etc. all of which have been developed concurrently at Boulder River and Teaching Research, are refinements meant to improve the effectiveness of the sequence.

With regard to the cbc sequence, one major and one minor difference between the two approaches is worth noting. The minor difference is that Boulder River trainers used the same reinforcement (often primary) on incorrect trial completion (defined as such because a prompt was required) as on correct trial completion, while TR trainers use primary rewards for correct trials only. The BR model used the primary on incorrect, physically guided trials because so many residents did not yet respond to social reinforcers. Teaching Research trainers get by this problem by writing prompts into the program and thus making a correct trial with a prompt possible. This process of writing prompts into the program or breaking the step into smaller components is called "branching."

The major difference is the prompt sequence. TR uses a two step sequence: no prompt, then physical prompt. BR used a four step sequence: no prompt, verbal, gestural, and then physical. Teaching Research doesn't use verbal or gestural prompts unless they are written into the steps. If prompts are written into the steps the trial is considered correct if no further prompt is needed to complete the behavior. This difference shows up on the data sheets very clearly. A resident under the BR model would show no changes on the data sheet as he/she learned to perform the given step with no prompts. Thus Boulder River trainers typically were not particularly concerned if a resident had straight zeros (incorrect trials) for a week or two. A TR trainer changes some aspect of the program

after two days of zeros. The BR approach, then, depends more on the subjective opinion of the trainer since it is he/she alone who knows whether the resident is improving towards the goal of performing the behavior with no prompts. This approach depends heavily on having very few trainers (preferably one) running the program so that one person is responsible for knowing whether progress is occurring. The high (but declining) turnover rate for direct care staff at BRS&H made this a difficult situation.

An advantage of the BR method is that it requires less clutter on the clipboards since there's no branching. Faced with a population generally lower in functioning level than that for which the TR curriculum was written, it seemed to be a big problem that many branches would be required if the TR curriculum were adapted. Another advantage of the BR method is that daily updating is not necessary. Updating is the process of reviewing clipboards of resident programs and writing in decisions on what step and phase and branch, if necessary, the resident should be probed, trained, baselined, or post tested on in the next session.

A big advantage of the TR system is that it has been taught to and is being used by a large number of people. Thus, the mechanism for training large numbers of staff has already been developed and shown to be effective. Steps in that direction had been taken with the BR method but some crucial aspects had not yet been developed. Faced with pressure to train staff as quickly and effectively as possible, this became a major point. Furthermore, the TR method is easier to teach to previously naive employees because it requires fewer on-the-spot decisions.

Here are the major deciding points in the choice to go ahead with the TR system:

1. Simplicity - the method seemed to

require fewer decisions on the part of inexperienced trainers.

2. Completeness - the entire model had already been used elsewhere to train many paraprofessionals.

3. Greater data orientation - the TR method forced trainers to look more closely at the effects of their teaching on the student.

Unfortunately, there seemed to be little latitude for compromise between the two approaches, their similarity notwithstanding. In training large numbers of people, the choice had to be made to either teach trainers to uniformly use a four step prompt sequence and thus relinquish a close session to session watch on the data or teach them to write a branch of the program if a prompt is indicated as necessary by the data. A minor compromise to this problem has been to employ shadowing (Foxy and Azrin, 1973) so that after no response or an incorrect response the physical prompt is as minimal as necessary to get the student to perform the required behavior.

In the past four months 80 employees have been trained using what was described here as the TR approach. Enough changes in that approach such as shadowing and the "refinements" mentioned in the third paragraph of this article, have been made at Boulder to justify calling it a Boulder method rather than a TR method. Thus a new Boulder training model has been generated out of the interplay of the above two teaching strategies.

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PLASKA AND KASER PRESENT AT AAMD

Assistant Director of Community Services Timothy Plaska and Jane Kaser, formerly a BRS&H Training Officer II presented a paper at the annual meeting of the American Association on Mental Deficiency in Chicago May 31. The presentation was entitled "Preparing the Moderately and Severely Retarded for Community Placement: The Development and Preliminary Results of Using a Simulated Home Environment within an Institutional Setting." It describes the development and results of using several simulated home environments as training sites to teach community living skills to moderately and severely retarded individuals. The results of BRS&H's first such project, the BEEP project (Boulder Environmental Enrichment Project), the cottage 12 project (a revision of BEEP which followed), and the Community Services Group Home (a 24 hour intensive training facility) are discussed.

Plaska and Kaser also explain how training needs for residents were identified and how training techniques, data collection and evaluation procedures were developed. The bulk of their presentation deals with the Group Home, describing such aspects as resident selection, staff training, and the use of overcorrection procedures. Data are also presented on the number of disruptive incidents, self-abusive episodes, and training programs conducted by staff.

More information on this paper can be obtained by writing Timothy Plaska at BRS&H.

NOTES ON FOSTER PRESENTATION

by Ron Langworthy
Training Liaison

Back on March 31, Ray Foster, Director of Camelot Behavior Systems in Parsons, Kansas, consulted at BRS&H and gave an inspired and inspiring talk at a meeting of the Society for the Advancement of Behavior Therapy. I recently reread notes on that talk and even though it happened quite a while ago, some of the thoughts I gleaned from the notes are edifying. The title of his informal presentation was "Behaviorists as Agents of Change." Following are some of Foster's thoughts which I've paraphrased. My apologies to Ray for any significant misrepresentations.

When one is disagreeing with others, explaining their behavior in terms of critical hostilities (they're out to get us) is probably a misperception. We often view others' mistakes as hostile, but when we do wrong we chalk it off self righteously to an "honest mistake."

Under stressful conditions there's a severe reduction in the amount of perceived alternatives (either we win or I'll quit). Work for compromise.

If you have an important problem stated in general terms, then the solution is also stated in general terms, making it seem more difficult than the series of small specific solutions it really is. Task analyze large, general solutions into small, specific steps.

Operant techniques are most likely to be applied to clients (those who share little of our behavioral repertoire). We then take responsibility for their failures. If someone above us turns down our proposal, however, we resort to name calling instead of taking

responsibility for the failure and re-writing the proposal in the administrator's language or going through different channels.

When we recognize that others operate under behavioral principles, we begin to treat them more gently (we eliminate blame, name calling). The same must be extended to our own behavior (we resort to guilt, self deprecation, etc.). So it isn't just dumb or naive people who are amenable to behavioral techniques.

It's fallacious to assume that lower echelon people have no control over the reinforcers of the upper echelon. After identifying the reinforcers for upper echelon people, deliver them contingently.

Bitching is defined as describing a problem to someone other than the person who has the power to change it. Complaining is describing the problem to a person who does have the power to change the situation. Complain, don't bitch.

Generalizations are almost always wrong, so if you're going to use them, don't use negative ones. An example of a negative generalization is "institutions are by nature debilitating." A low rate of innovativeness often results from negative generalizations. Positive generalizations allow you to bridge the occasional lapses, but negative generalizations ignore periodic positive responses and they go unreinforced.

Blaming your failures on your superiors gets you nowhere. Accept responsibility for your mistakes and try again.

HUMAN RIGHTS COMMITTEE FORMED by Margaret MacDonald

A Human Rights Committee has been formed at Boulder River School and Hospital to review any procedures that may involve questionable or possibly

unethical techniques. Federal standards for intermediate care facilities for the mentally retarded require that any restrictive programs, such as time out from positive reinforcement, be subject to review by such a committee.

Members of the committee include Mrs. Jo-Anne Willis from Helena, chairperson; Dr. John Dodd, Director of Rehabilitative Services at Eastern Montana College; Dr. Charles Horejsi, professor of social work at the University of Montana; Mr. Floyd McDowell, Superintendent of the School for the Deaf and Blind in Great Falls; Dr. Mark Mozer, clinical psychologist in Helena; Mr. Rusty Redfield, Director of Community Services at BRS&H; and Dr. Richard Swenson, Director of Habilitation at BRS&H.

Programs and procedures to be reviewed by the committee include those involving time out from positive reinforcement; required relaxation, wherein a person is required to lie down on his bed for a specified period of time following the exhibition of a highly undesirable behavior; or any other loss of privileges, Swenson said. State and federal laws and regulations lay down limitations to the types of restrictive programming that can be approved. For instance, a meal cannot be denied a resident of an institution as part of a program.

At its first meeting, March 8-9, the committee set up guidelines for reviewing programs, according to Swenson. Programs submitted for approval should have baseline data, clear specification of the behavior to be modified, a detailed description of the procedures to be followed and provisions for evaluation of progress made. If progress is not made within a specified length of time, the program would then be discontinued, Swenson explained.

The committee will also request documentation on alternative, less restrictive programs aimed at the same target behavior that have been tried and failed, Swenson said. General information on the client will be considered by the committee as well as the criteria used to select a particular behavior and the procedure to deal

with it, he stated. Finally, the Human Rights Committee requires that any program it approves involving aversive techniques be run concurrently with positive skill acquisition programs.

Symbolic Communication Project

by Coni Dome

Training Officer I

The Symbolic Communication Project began February 2, 1976, in an empty log cabin located on the BRS&H campus. After a few trips into Helena for supplies and a few visits from the shop people, the cold, empty log cabin was transformed into a warm homelike environment, complete with living room furniture, pictures, plants and a bird.

Trainers in the Symbolic Communication Project found that the environmental enrichment and the homelike atmosphere had profound effects on the children of cottage 15. The residents' stereotypic and maladaptive behaviors dropped considerably in the cabin as compared to the in-

stitutional-type cottage setting.

The project is a Title I service to all residents of cottage 15. We are delivering services to twelve children a day in the cabin. Programs are specialized to fit every child's particular needs. Speech and language skills, pre-academic skills such as color matching, visual discrimination, and shape discrimination are but a few of the programs presently in operation at the cabin.

Emphasis is placed on proper use of the environment and incidental teaching. The residents are encouraged to speak and interact with their peers as often as possible. The children also participate in some home living skills such as plant-int and watering plants, popping pop corn, and occasional house cleaning.

The project has proven itself to be a very reinforcing environment for the normalization of cottage 15 residents and as a training center.

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THE BOULDER BEHAVIORIST

Vol. 4, No. 6

August 31, 1976

LOUISE KENT VISITS BRS&H

by Tom Seekins

Coordinator/Supervisor

Title I

Louise R. Kent, author of the Language Acquisition Program for the Severely Retarded, visited BRS&H on June 28 as a consultant to the Title I program. Kent is Director of the Habilitation Department at Coldwater State Hospital, Michigan and was one of the early activists who helped shape the behavioral program for the department of psychology at Western Michigan University.

Kent's consultation was scheduled to provide the Title I staff with a better understanding of the language acquisition program since it is widely used here. We also hoped that she would share some innovative aids in working with the profoundly retarded and multiply handicapped, as well as offer some insights on developmental psychology and psycholinguistics.

Kent's major suggestion was to incorporate into the language acquisition program or any other program a "total communication" approach. This approach involves the use of sign language in conjunction with normally used verbal instruction. For example, a trainer working on a dressing program might tell the trainee to, "put on your shirt." A trainer using the total communication approach would also sign this command and would thus be providing additional cues to help the trainee process the information.

Kent also recommended an intensive play program designed for the most withdrawn and profoundly retarded individuals. The program aims to alleviate the social

deficit of some individuals so that they can relax in a learning situation. More information on this program can be obtained from Louise M. Bradtke, BKR Educational Projects Inc., 1790 S.W. 43rd Way, Fort Lauderdale, Florida 33317.

Kent also discussed some extremely interesting aspects of psycholinguistics. She indicated that psycholinguistics, that body of knowledge on which many training programs are based, reflects only the sequence in which the language of normal children develop and is not necessarily the most efficient sequence by which to teach language. Little or no empirical data exist concerning language development for the special child. Kent implied that psycholinguistics, in developing its pedagogical structure, fails in that it addresses only the way things do happen. Psycholinguistics could contribute a great deal to the understanding of language if it were to "play around with" different variations and models.

During her one day visit, Kent was able to convey a tremendous amount of information. We hope to invite her back and if the airlines don't foul up her reservations again, she could perhaps stay for a few days.

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BB TO BE COOPERATIVE VENTURE

by Richard P. Swenson, Ph.D.

Developmental Disabilities Division

With the agreement of Dr. Gus Hamerlynck, Director of DDD, and Bill Conyard, Superintendent of BRS&H, the Boulder Behaviorist will become a cooperative effort between the two agencies. One advantage of this agreement is that it should facilitate cooperation and communication between institutional and community programs. Two of the problem areas we'd like to address are:

- 1) BRS&H staff receive little information from group homes or other settings with regard to what behaviors clients from Boulder are unexpectedly deficient in. Many of these problems could be eliminated if Boulder staff were more aware of important community "survival" skills.
- 2) There has been very little programmatic information exchange between Boulder and DDD staff. This could benefit both groups.

In general, we'd like to see more communication between the two agencies involved. This has historically been a significant problem, partly because DDD and BRS&H are under totally separate departments (SRS and Institutions), with only the Governor's office capable of overseeing the efforts of both.

In conclusion, all staff persons from DDD (both regional and central) and BRS&H are asked to give this effort a good start by submitting statements, questions or any other type of article pertinent to this project. As we all know, it is always the clients who lose the most when agencies compete and/or fight. Let's cooperate for their sake.

NON-SLIP

by Lorrie Hartman
Training Officer I

Last March 23 and 24, Joseph K. Carrier, Ph.D., author of the Non-Speech Language Initiation Program (Non-SLIP), conducted a two day workshop at BRS&H. Title I staff and various members of the communications department participated in the workshop.

Carrier explained that Non-SLIP is a breakthrough in language training for severely limited, nonverbal individuals. The general intent of Non-SLIP is to provide a structured, finely graded set of procedures for teaching individuals how a language system works. The Non-SLIP kit is a carefully designed teaching system that establishes specific training goals, specific program functions and individualized options for each language trainee. The primary strategy of Non-SLIP is to reduce the complexity of language training by developing a visual array of non-speech symbols which can be manipulated to provide symbolic functions. The individual ultimately learns to arrange plastic symbols from left to right on a response tray to form a chain of words which convey meaning.

Carrier and his associates derived much of their rationale for symbolic language acquisition from Premack's functional analysis. When working with chimpanzees, David Premack pointed out that communication required two basic components:

- 1) a set of symbols to represent various meanings
- 2) a set of rules for using the symbols

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Superintendent William Conyard
 Developmental Disabilities Division Richard Swenson, Ph.D.
 Supervisor/Coordinator, Title I Tom Seekins
 Editor Barbara Holum Langworthy
 Production Larry Kerzenmacher

involved.

Premack taught chimpanzees⁶ to communicate with plastic chips. To adapt the system to humans required changing the way that such symbols are placed and taught.

Carrier's data demonstrated that severely retarded, nonverbal individuals can be taught language with Non-SLIP. There were approximately 180 individuals who were included in Carrier's experimental design; all were labeled severely limited, nonverbal individuals. Only three out of 180 failed to complete Non-SLIP.

The program is specifically designed for trainees for whom language teaching exercises have previously failed. Carrier stated, "Failure to teach has usually been equated with the ability to learn."

The specific skills that are taught are:

- 1) number and color discriminations through match-to-sample tasks;
- 2) rote sequencing in which the individual learns a seven sequenced grammatical sentence structure by color and number codes;
- 3) shape and picture stimulus discriminations through a match-to-sample task;
- 4) labeling 10 uniquely shaped symbols to ten subject noun pictures. In this manner a symbol is consistently associated with a picture. This is the first abstract association within the program and also teaches discrimination among the subject nouns;
- 5) combining both labeling and sequencing skills;
- 6) discriminating between five verbs;
- 7) discriminating between ten objects of the preposition;
- 8) discriminating between three prepositions.

The above target behaviors in Non-SLIP are taught through behavior modification techniques.

As the individual advances to the label-

ing program, the trainer prompts him or her to vocally imitate the pronunciation of the ten subject nouns. This imitation often generalizes to other given cues, such as verbs, objects of the preposition and prepositions. The sequence which is finally learned is: first article, subject noun, verb auxiliary, verb, preposition, second article, and object of preposition. An example is, "The cat is sitting on the grass."

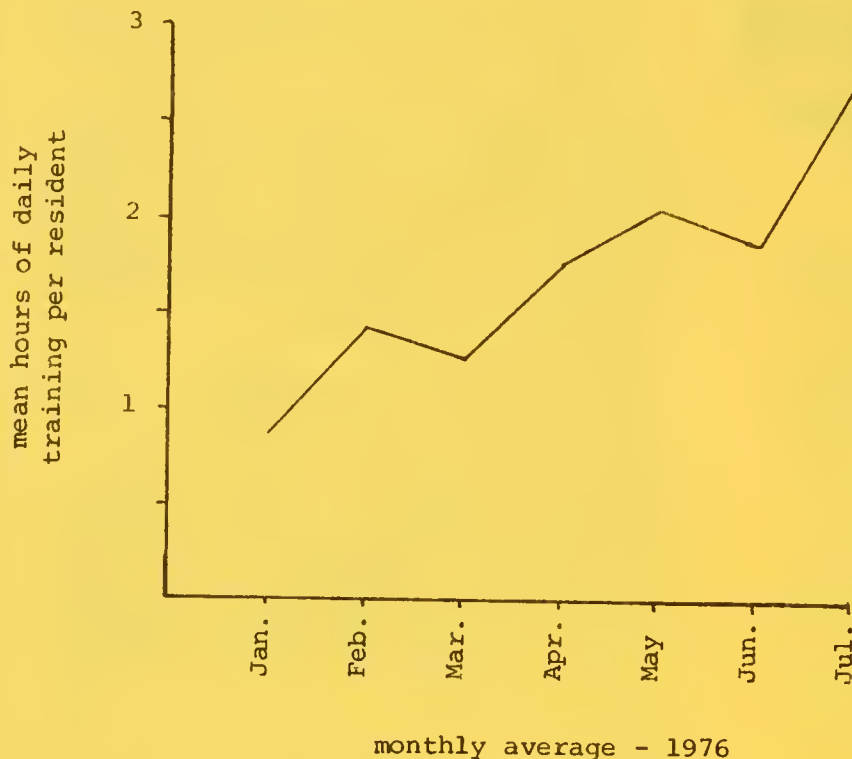
At BRS&H there are approximately 17 residents currently enrolled in the Non-SLIP program. All are nonverbal and are considered profoundly retarded. Most have made considerable gains. Non-SLIP has a total of 21 programs, their levels corresponding to Carrier's developmental sequence. Even with some fairly recent program initiation dates, the 17 residents have altogether graduated from 53 of the programs.

Non-SLIP's systematized format provides a means for nonverbal individuals to acquire the basic requisite skills that are needed for verbal communication; it prepares handicapped individuals for more advanced speech training. Non-SLIP's tangible symbol set makes it possible to produce language under a properly managed environment and circumstances when no other method has proven successful.

RESIDENTS RECEIVE 312% MORE TRAINING

As illustrated in the following graph, in July BRS&H residents received an average of 2.73 hours of training per day as compared to an average of .876 hours in January of this year. This jump reflects an increase of 312% but does not reflect the fact that some residents are receiving many services and others are still receiving none.

Under the direction of M.S. Thompson, the Data Analysis Lab (DAL) at BRS&H publishes and distributes a weekly summary report on five indicators of the training effort. Each variable is



reported by individual cottage and is also summarized into a weekly total.

One indicator in the weekly summary report, "percent of residents in programs," represents residents who are served by any of the following areas: cottage staff, physical therapy/occupational therapy, Title I, school, speech and hearing, foster grandparents and deaf/blind. This percentage has steadily increased from an average of 69.9% during last December and has not dropped below 96.26% since June 14. The "percent of staff doing training" refers to the proportion of cottage staff, the Habilitation Aides, who are regularly running at least one program. This percent has also increased, from an average of 24.5% in December to 58.2% in July.

"Percent of optimal program hours" reflects the degree to which the institution's goal of providing three hours per day of programming per resident is being met. This includes both the services of cottage staff and auxiliary

service areas. This has increased from an average of 23.8% in December to 95.1% of last month. "Percent of staff hours training" refers to the proportion of staff hours spent doing training out of an eight hour shift. This measure rose from an average of 14.7% in December to 33.5% in July. This variable can be confusing, reported Thompson, as it actually reflects the number of hours of services received by the resident so that for group programs, trainers are credited with more than the actual amount of time spent.

Lastly, the "mean percentage of goal attainment" on the weekly summary report is the mean of the preceding four indicators and is a general measure of the degree to which the goals of the training effort are being accomplished. This measure rose from an average of 33.3% in December to 71.0% in July.

Thompson pointed out that these variables measure only input effort and are not indicators of the effectiveness of the training effort. "The more important 'outcome' measures can be faded into the evaluation system gradually," he explained. However, it is evident from these data that residents are currently receiving substantially more training than they were last December and that more cottage staff are involved in delivering this training. On June 30, 1977 the training goal will be increased to five hours per day over a seven day period and eventually to six hours per day per resident.

HORNER COMMENTS ON PROMPTS

(Editor's note: The following letter was received by Ron Langworthy from Don Horner and is printed with Horner's permission.)

Dear Ron:

I enjoyed reading your article in the Boulder Behaviorist comparing the Teaching Research strategy with your own.

I wish to comment on the statement "This difference shows up on the data sheets very clearly. A resident under the BR model would show no changes on the data sheet as he/she learned to perform the given step with no prompts. Thus Boulder River trainers typically were not particularly concerned if a resident had straight zeros (incorrect trials) for a week or two."

It seems that such data collection would indeed be insensitive to change from one form of instructional control to the next (i.e. physical to gestural to verbal to no prompt) and that no immediate decision could be made on the effectiveness of the program except by those who could witness any improvement over time. A simple modification of the scoring could be made which would provide such sensitivity. Instead of having a + and 0 (correct, incorrect), have a 0,1,2,3 code in which 0 = required physical prompt, 1 = required gestural prompt, 2 = required verbal prompt, and 3 = required no prompt. Thus a graph of a 15 step program would go from 0 indicating the individual required physical guidance on every step in the program to 45 indicating every step in the program was performed with no prompts. A glance at the data sheets across sessions reveals any steps that are causing trouble and for which a "branch" in the program should be written.

I believe as you that Vic, Bud and the others at Teaching Research have done a tremendous job and have a nice system; but I believe the precision offered by careful programming of specific classes of prompts is superior to the no prompt-physical prompt dichotomy (although I don't have any data to back this up right now, your article alerted me to the importance of determining the relevance of the verbal and gestural prompts in the four stage sequence.

Keep the Boulder Behaviorists coming. I'm sincerely impressed by your efforts and enjoy reading about the things you're able to get going.

R. Don Horner
Research Associate
University of Kansas
Department of Special Education
Lawrence, Kansas 66045

LANGWORTHY RESPONDS

I was terribly pleased to receive Don's reaction to the article comparing the BR and TR strategies. Don's excellent suggestion offers a way to combine the two strategies, using the best of both. Unfortunately BRS&H's present data system would be hopelessly complicated by the introduction of the 0,1,2,3 scoring code but if the system is modified, BRS&H should consider an expansion to allow the four codes. The change would also both complicate the staff training process and the one-on-one situation itself. In spite of these complications (or perhaps because of them), most trainers who have used both methods agree that the four step sequence is advantageous with the severely and profoundly retarded. For staff who work with severely and profoundly retarded the four step sequence might be a good basis for upgrade training.

Under the system now in use at BRS&H, trainers don't routinely use verbal and gestural prompts unless lack of progress with the two step approach indicates that another prompt would help. The additional prompt is then written in as a branch.

Thanks for the perspicacious suggestion, Don.

Ron Langworthy
Training Liaison

BICKETT PUBLISHES IN JABA

Alan Bickett, Training Officer I in Title I at BRS&H, is one of the authors

of an article published in the summer, 1976 issue of Journal of Applied Behavior Analysis. Entitled "Increasing Extended Care Facility Residents' Attendance at Recreational Activities with Convenient Locations and Personal Invitations," the article is authored by Juhlin M. Newkirk, Sherri Feldman, Bickett, Martin T. Gipson and John R. Lutzker. Newkirk and Feldman are now at the Department of Psychology, University of Southern California, Los Angeles. Gipson and Lutzker are at the Department of Psychology, University of the Pacific, Stockton, California.

The study examined the effects of room location, use of names in announcements and the mode of announcements upon the attendance at recreational activities of 26 randomly selected nursing home residents, the majority of whom were former mental patients. The use of a centrally located room and the use of residents' names in the announcements were shown to increase the attendance at recreational activities. For more information, refer to JABA, 9:2 or contact Alan Bickett at BRS&H.

Bickett is currently involved with developing a contingency system for Title I staff to increase their record keeping, training sessions and reviews of published articles. He is also working with other Title I staff on summarizing information taken from the second administration of the manifest, an inventory of resident behavior.

ULRICH INVITES PH.D. CANDIDATES

Dear Friends:

As some of you may know by now, Western Michigan University has initiated a Ph.D. program in both experimental and applied behavior analysis.

I would like to encourage potential Ph.D. candidates with research interests in areas somewhat atypical of what we "operant type" have been doing in the past. In fact it's hard for me to define

them exactly but I'll try.

For a number of years now I've been living in an experimental community. I am extremely interested in what might be referred to as behavioral ecology, the environment and its proper use and the study of some of the more basic survival skills such as frequently discussed in Mother Earth News. In a sense, I'm interested in people who are interested in experimental discoveries that are not quite as tied to books and verbal behavior and the typical lab setting.

In Walden Two Skinner has a student (Rogers) say to Professor Burris:

"Why don't we just start all over again the right way?" Rogers continued with great difficulty, almost in anguish, as if he were being forced to accuse me of some egregious shortcoming. "Some of us feel that we can eventually find the answer in teaching and research," I said defensively.

"In research, maybe," said Rogers quickly. "In teaching, no. It's all right to stir people up, get them interested. That's better than nothing. But in the long run you're only passing the buck - if you see what I mean, sir." He stopped in embarrassment.

"For heaven's sake, don't apologize," I said. "You can't hurt me there. That's not my Achilles' heel."

"What I mean is, you've got to do the job yourself if it's ever going to be done. Not just whip somebody else up to it. Maybe in your research you are getting close to the answer. I wouldn't know." I demurred. "I'm afraid the answer is still a long way off."

"Well, that's what I mean, sir. It's a job for research, but not the kind you can do in a university, or in a laboratory anywhere. I mean you've got to experiment and experiment with your own life! Not just sit back, not just sit back in an ivory tower somewhere, as if your own life weren't all mixed up in it. Perhaps this was my Achilles heel. I missed my chance to give him a reassuring word. I was thinking of Frazier and

of how remarkably well his ideas had survived transportation. A professional theory occurred to me: perhaps this was the test of the goodness of an idea, of its internal consistency. But Rogers' noise broke through.

"Have you ever heard of a man named Frazier, sir?" (pp. 4-5)

I would like to get students interested in the Frazier-type experiment, i.e. doing things with your own life and observing the results. Jane Goodall wrote a book, In the Shadow of Man that is a good example of a slightly different type of research, as did John C. Lily in his Simulations of God.

If you are interested in learning more about our research interests at the Behavior Research and Development Center and the opportunity for you to earn an advanced degree, drop me a note.

Sincerely,

Roger E. Ulrich
Research Professor
Western Michigan University
Kalamazoo, Michigan

WORKSHOPS SCHEDULED FOR WINTER

Behavior Improvement Associates, Inc. are sponsoring a series of one day intensive workshops on behavior modification in business, industry and government. Covered in the workshops will be the basic principles of operant conditioning as applied to performance problems in the work setting and specific concrete procedures for enhancing the work environment. Locations and dates of the workshops are:

Tarrytown, N.Y. Nov. 16, 1976
Dallas, Texas Jan. 6, 1976
San Francisco, CA. . . Jan. 11, 1977
Chicago, Illinois. . . .Jan. 13, 1977

For further information write Behavior Improvement Associates, Inc., P.O. Box 296, New Paltz, NY 12561 or call (914) 255-8827.

SWENSON MOVES TO DDD, MARKING AN ERA OF PROFESSIONAL LEADERSHIP AT BRS&H

by Barbara Holum Langworthy



After four years at BRS&H, Richard P. Swenson, Ph.D. has left the institution for a position as Chief, Habilitation and Evaluation Bureau, Developmental Disabilities Division. Dr. Swenson served as Director of the Title I grant from May of 1972 to October of 1975 at which time he assumed the position of Director, Habilitation Department. With Swenson's departure, the Boulder Behaviorist would like to take a look at developments over the past four years.

When Swenson arrived at BRS&H in 1972, he took over a loosely organized, thinly spread staff. In each unit of one to

three cottages a behavior modification specialist and a behavior modification technician aide were expected to organize, in little more than a consultant capacity, the training effort for often well over 100 residents. The BMS's possessed a wide range of skills and educational backgrounds, and this of course showed up in the techniques they used in training. They were supervised primarily by unit supervisors who had equally varied educational backgrounds and were hired mainly for their managerial skills.



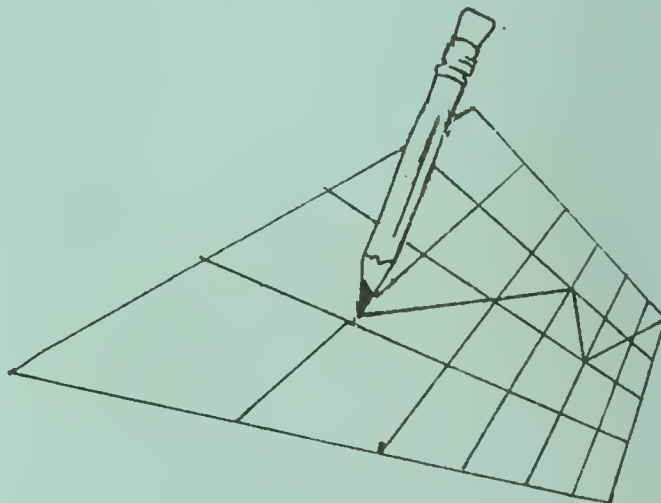
Within a short time Dr. Swenson took over the direct supervision of all Title I employees and began an intensive training program for his staff. The first cohesive project undertaken by Title I was the establishment on January 23, 1973 of cottage 15 as a special training cottage. As part of their training, the Title I staff researched and reported their recommendations on the most efficient training methods for each of the major self-help skills. In addition, it was intended that staff would develop specific training and evaluation procedures during the course of the project as well as demonstrate the degree

of resident progress possible when a coordinated effort was made. The Title I-funded Benchmark project at the Western Carolina Center in Morganton, North Carolina provided some of the initial organizing patterns for the cottage 15 project.

When the Title I staff moved out of the cottage 11 weeks later due to a resident re-grouping, much progress had been made. For example, 176 program step graduations had been completed (average per resident was 8); the number of programs carried out by direct care staff had gone from approximately 30 per week to 60 per week; and the number of direct care staff involved in doing programs had gone from 3 to 17. In addition, a number of unobtrusive measures were taken to get at spin-off benefits of increases in self-help skills, e.g., weight of food spilled by residents during meals had gone from an average of 18 ounces per meal to 5 ounces; and the weekly average of soiled clothing articles had gone from an incredible 595 during baseline to 49 during the 11th week of intervention. It is pertinent to note that 3½ years later cottage 15 continues to be one of the most training-oriented and productive cottages at BRS&H.

With the appearance of its first issue on February 20, 1973, the Title I Boulder Behaviorist set out to increase the training of residents by direct care staff by providing pointers on running programs, general encouragement, published feedback on their training programs and an incentive system. Published weekly for 26 weeks, the newsletter featured graphic representations by unit of the number and type of training programs currently being conducted by direct care staff. Of those staff, the BB reported the names of the 10 people who had been randomly drawn as winners of prizes donated from local businesses. Only those staff who had conducted a bonafide program for five consecutive days of training were eligible for the drawing. An increase in programming was seen following this. The incentive system was then discontinued 20 weeks later to determine its effect on the number of training programs. This reversal design resulted in no decrease in training by direct care staff. The average number of programs 8 weeks prior to the discontinuation of prizes was 56.5. The average number of programs 8 weeks subsequent to the change was 61.25. The incentive system may have been responsible for the initial general increase in training by direct care staff but appeared not to be a factor in maintaining that level. The fact that the absence of the incentive system didn't reduce the level of training could suggest that the natural consequences of doing training were reinforcing that behavior in direct care staff.

In April, 1973, a Title I position was created to compile and analyze data generated from training. Later that year the publication of the first compilation of programs, the Title I Project Report, occurred. This report analyzed the quantity, quality, type and success rate of behavior modification programming during the previous three grant years. From this modest beginning has grown our present computer-based Data Analysis Lab. The data analyst reported that as of March 21, 1973 there were 158 ongoing behavior modification programs. The DAL recently reported that as of August 29, 1976, there were 1485 ongoing programs.



The efforts of the Title I staff in those times were focused on prompting the direct care staff to implement programs with residents in the manner of Tharp and Wetzel's "triadic model." Under this model, instead of working directly with clients, behavior change agents work with mediators who care for, live with and affect the clients. In other words, the model suggested that it was more efficient to train the direct care staff to run programs than for the Title I staff themselves to do the actual programming with residents. When the triadic model was evaluated in August of 1973, however, it was found that for each hour spent training and supervising direct care workers, there was an average yield of 3.2 training programs implemented. On the other hand, the average yield per hour when Title I staff directly implemented programs was about 4 programs. It was then apparent that the triadic model was not working efficiently at BRS&H. One problem was that the rapid turnover rate of direct care staff prohibited long range training and planning. Also, the behavior modification staff lacked any authority to ensure consistency or to require training. All too often Title I staff spent their time uselessly trying to cajole direct care staff into running programs. The cottages were grossly understaffed then and to allot an employee even a small time slot in which systematic training could be done was a painful concession for supervisors to make. A Boulder Behaviorist article summarized it thus: "A total systems approach aimed at changing the structure of the institution is necessary before powerful incentives can be made available for increasing the level of training."

In October the behavior modification staff reorganized from a unit assignment (each person being totally responsible for the programming in one to three cottages - a unit) to caseloads and special projects. This change occurred as Title I directed its attention to three new projects. The Cottage Life project had a staff of five who were each directly responsible for a caseload of 10-20 residents with one or more programs per resident. The Boulder Environmental Enrichment Program (BEEP) was established to train residents who were likely to be placed into the community soon in advanced self-help skills such as grooming, cooking, time-telling, money-handling and table manners.

Cottage 15 was the site of the third major project, the Skill Acquisition Cottage (SAC). The primary difference between this project and the original training cottage was that a behavior modification specialist would function as supervisor for all cottage personnel. What this meant was that a supervisor sympathetic to the values of data-keeping, defining behaviors and contingent reinforcement could require direct care staff to run programs. Here was a supervisor who could demand specific training skills and consistency from her staff.

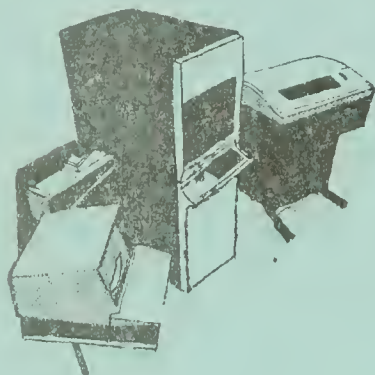


1973 was truly an eventful year for in December another great breakthrough occurred at BRS&H -- the publication of the Program Procedures Manual. Even though several training manuals were already in print, there was no one source (to our knowledge) that suited the needs of BRS&H trainers -- basic step-by-step programs with a simple format and data system on training self-help skills to the profoundly and severely retarded. Prior to its publication and distribution

a BRS&H employee wishing to do a training program usually had to write an original one himself, even for the most basic of programs. The PPM offered for the first time a relevant reference tool on training to which everyone had access.

In October Swenson spearheaded the organization of a Montana branch of the Association for the Advancement of Behavior Therapy, a group which still flourishes. The organization has since changed its name to the Society for the Advancement of Behavior Therapy and has expanded to include more non-BRS&H professionals in Montana.

1974



1974 saw the development and refinement of two evaluative techniques, the social inventory and the trainer proficiency scale. It also saw an expansion and refinement of the Data Analysis Lab as it was able to transfer program data from the basic data sheet to coding forms, punched on cards and read into a computer for processing.

July provided a landmark in the gradual integration of behavior programming into the institution's total framework when Title I was given responsibility for supervising all aspects of Unit V which consisted of cottages 12, 13, 14 and 15. The success of the cottage 15 SAC project as a method of service delivery in comparison with BEEP and Cottage Life provided the justification for this added responsibility. Later the model used in Unit V would help organize all other cottages in the institution. The cottages in Unit V were to provide 24 hour supervision of the total environment of 86 residents. July also saw a momentous reorganization when all BRS&H residents were regrouped according to their habilitative needs. This move was planned to provide residents with the same or similar training needs a living area together so that staff could better meet the residents' training needs.

Also in 1974, a project aimed at community intervention was developed in Title I. The project ensured that training programs initiated by Title I staff at BRS&H would be continued when a resident was placed in the community. In addition, the project provided services to parents who brought their retarded children to BRS&H on an out-patient evaluation basis.

Another important development in 1974 was the establishment at BRS&H of the Camelot self-paced inservice training course. This marked the first large scale, academic behavioral training program for BRS&H employees.

In 1974 Title I also designated a new position, instrumentation specialist, which was responsible for designing and developing more efficient procedures for the education and training of the mentally retarded through the use of operant technology. Some of the projects eventually developed in this capacity were: a clown's face teaching aid which provided visual and auditory stimulation as reinforcement; an automated instructional module for teaching discrimination tasks to retarded children; a six-digit electronic stopwatch and response counter which is small in size, easily repaired and comparable in price to a mechanical version; a plan for developing a cottage based data entry system; and an EMG triggered language board.

The year closed with a suit by the Justice Department against BRS&H for the "widespread violations of the rights secured to citizens of the United States who are residents and potential residents of the Boulder River School and Hospital."

1975

Early in 1975 the Data Analysis Lab acquired a computer terminal and changed over to a remote job entry procedure for data entry and access.

Also in this year the Training Guidelines was published. It offered for the first time a written introduction to the training approach at BRS&H and a collection of techniques to use in maladaptive behavior programs.

The Montana legislative session of 1975 resulted in various progressive bills that benefited the residents and staff at BRS&H. HB 353 provided community based services for the developmentally disabled. SB 388 declared certain human rights of the developmentally disabled which were incorporated into commitment procedures and the right-to-treatment law. HB 679 and 272 provided pay increases to state employees. These bills increased the direct care worker's salary from a monthly of \$428 to \$572 and the behavior modification technician's salary from \$686 to \$909 monthly. Lastly, HB 289 appropriated a budget increase of 77% to BRS&H.



1976

Much effort in the present year has been directed toward implementing the reorganization at BRS&H which was mandated by SB 388 and the Justice Department suit. Individualized Plans of Habilitation were an important component of the new structure, requiring for each resident a thorough evaluation and specifying a total plan of treatment. To facilitate implementation of the IPH's, the reorganization created a cottage supervisor position and two inservice training instructors (HA IV's) for each cottage. The HA IV position is very similar in function to the former Title I behavior modification technician position. In fact the organization of the new Habilitation Department was based on the organization of Title I's Unit V. This may prove to be one of Title I's strongest contributions to BRS&H.

Included in the many changes at BRS&H was the nature of the Title I grant. Because the state of Montana had assumed responsibility for training both basic self-help and higher level skills (by appropriating enough staff to do so), the grant changed its focus to retain its supplementary status. The 1976 Title I grant is basically involved with teaching general communication skills and hence its supervision was transferred to the Director of the Communications Department.

The remarkable progress that BRS&H has made in the past four years in providing a more efficient service delivery system for residents is naturally the result of many people's work. Swenson, however, has frequently pointed the direction and helped develop the means to move BRS&H from a custodial oriented facility to a training center.

In his new position with DDD, Swenson will share responsibility for developing and monitoring community programs and services for developmentally disabled clients as well as placing residents from BRS&H into appropriate settings. Happily, he will also continue his polished influence on the BB. We congratulate the DDD for recruiting such a goodman and wish him continued success in his endeavors.

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THE BOULDER BEHAVIORIST

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October 25, 1976

CIVIL RIGHTS SUIT DISMISSED

The civil rights lawsuit brought against BRS&H in November of 1974 by the U.S. Department of Justice has been dismissed by U.S. District Court Judge Russell Smith. Smith's order affirmed a motion for dismissal filed by the State. The suit alleged that BRS&H "failed or refused to provide adequate treatment and habilitative care to the residents"... "failed or refused to provide Boulder River residents with decent and humane living conditions and to keep such residents free from harm"... "employed or permitted the employment of Boulder River residents without compensation in non-therapeutic work..."

Judge Smith based his order on a similar decision by Chief Judge Edward S. Northrop of the U.S. District Court of Maryland. Judge Northrop's decision was based on the case of United States vs. Soloman, et. al., a right to treatment suit brought by the U.S. Attorney General on behalf of the residents of Rosewood State Hospital. Judge Northrop did not pass judgement on the validity of the Justice Department's allegations, but ruled that "the power of the executive branch of government does not extend to bring a suit against the state..." in a matter which does not constitute an emergency impediment to interstate commerce or a threat to national security. Judge Northrop also stated, "This Court simply cannot believe that Congress intended or expected that while an elaborate plan to improve the lot of the mentally retarded was being implemented by the one federal agency (the Department of Health, Education and Welfare) with

expertise in the field of mental retardation, another government agency (the Department of Justice) with no expertise in the solution of the very difficult problems posed by mental retardation would simultaneously be making wholesale attacks on a state's mental retardation programs under the guise of protecting thirteenth and fourteenth amendment rights. Surely, if Congress had wanted two agencies to be involved in ameliorating the states' efforts to help the mentally retarded, it would have at least provided some legislative guidance as to procedures for preventing the conflict and contradictory goals that can and do occur when two federal agencies independently act on the same matter."

BRS&H Superintendent William Conyard has emphasized that the state's responsibilities to continue providing quality services to the mentally retarded doesn't diminish due to this recent decision. If Montana's institution is going to provide optimum services then it will be necessary for the legislature to provide sufficient dollars and employees to meet the mentally retarded's needs.

BRS&H SEEKING SUGGESTIONS ON RECRUITMENT PROCEDURES

BRS&H needs qualified applicants for a variety of positions. Recently, the historical problem of low pay has been alleviated by salary increases which have made BRS&H competitive on a national basis. In addition, working conditions have improved remarkably as the resident population has decreased and the number of authorized positions has increased. It has been conjectured, in view of these improvements, that the main problem remaining is simply the lack of a widespread recruitment effort.

Many ways to recruit for positions have been tried - contact with University Placement Centers, state-wide newspaper ads, notices in professional journals, and recruitment trips within Montana and to other states. The lack of success of these techniques in attracting a large number of qualified applicants for professional positions in spite of a high unemployment rate could be attributed to a dearth of qualified professionals in the field or to a lack of systematic intervention from BRS&H. Boulder has profited only slightly from the national trend of movement away from large population centers to rural and semi-rural areas where the quality of life offers a palpable improvement.

Professionally, BRS&H provides a stimulating and challenging environment. The staff is young and energetic, dedicated to the development of a systematic, large scale training effort. BRS&H staff, if they can be simply characterized, work and play hard. The transformation from a custodial institution to a training center, while improving the lives of the residents has also had the effect of increasing cooperation between staff with diverse backgrounds. Opportunities for advancement have been good to excellent.

Boulder is situated in the Rocky Mountains where the air is clean and the folks are friendly. Within an easy drive are Yellowstone and Glacier National Parks, the Bob Marshall and other wilderness areas, abundant National Forest land, whitewater rivers, quality ski areas, and blue ribbon trout streams.

The Boulder Behaviorist welcomes suggestions on how to establish a more effective recruiting effort and encourages

qualified applicants to apply.

POSITIONS AVAILABLE

We are currently recruiting for the following positions. If interested please contact the Personnel Office, Boulder River School and Hospital, Boulder, Montana, 59632.

Cottage Supervisor: Annual Salary - \$14,332. Duties include program supervision for a group of residents; supervises the planning, development and implementation of individual habilitative plans; responsible for hiring, scheduling and evaluating cottage staff. Requires knowledge of educational technologies, master's degree in psychology, special education or related habilitation field and one year experience or any equivalent combination of education and experience.

Habilitation Aide IV: Annual salary-\$10,857. Primarily responsible for assisting the Cottage Supervisor with training assessments, measuring resident training progress, monitors program delivery and provides staff training in behavioral programs. Requires a bachelor's degree in psychology or special education or graduation from high school plus four years of experience in a related field.

Habilitation Aide I: Annual salary - \$7,529. Responsible for training residents in self-help skills, social skills and work skills using behavioral training techniques. Attends to the physical needs of residents and takes an active part in the development of residents' training programs. Requires high school graduation or G.E.D. No experience-----We will train.

Speech Pathologist I: Annual salary-\$14,332. Responsible for professional evaluation and remediation of language disabilities in mentally retarded individuals in conjunction with pre-verbal skills programs. Performs

tests for articulation, verbal comprehension, physical language, mental skills and hearing. Requires graduation from a college or a university with a master's degree in speech pathology and one year of experience in speech pathology.

Training Officer I: Annual salary - \$10,857. Working in a classroom setting with young severely and profoundly handicapped children, teaching pre language and learning skills and normal responses to normal environments. Requires a bachelor's degree in social science or a high school diploma and 4 years of experience or any equivalent combination thereof.

Administrative Assistant III: Annual salary - \$10,857. Duties: Assists habilitation department director with planning, organizing, directing and coordinating program operations; assists in preparation of budget requests and reports; assists with the development and interpretation of policies and procedures; supervises department clerical staff; coordinates special committee and review board functions; and performs secretarial duties including typing, dictation, scheduling appointments and answering of department correspondence. Performs various public relation functions.

Qualifications: Knowledge of the principles and practices of office management, supervision and administration as well as having knowledge of applied behavior analysis; ability to assist with the direction of a state agency; and must have four years of progressively responsible personal secretarial work and one year of secretarial coursework at a college or technical school or any equivalent combination of education and experience.

Education Director I: Annual Salary - \$15,722. Primarily performs administrative and professional duties in

planning and directing the Educational Program at a State institution. Organizes curriculum and supervises teachers of the severely and multiply handicapped individuals. Responsible for in-service training of teachers and budget preparations for the education department. Must have a working knowledge of educational services, vision impaired, hearing impaired, multiply handicapped as well as severe and profoundly retarded. Requires a master's degree in special education with two years in teaching and administrative experience. Must be able to meet special education endorsement required by the State of Montana.

Psychologist III: Annual Salary - \$15,722. Duties include formal psychological testing and administration of behavior scales; formal writeup of results of evaluations. Minimum requirements are master's degree in psychology with academic training in evaluation. Experience with mentally retarded clients preferred.

Physical Therapist: Annual salary - \$14,332. To assist in planning, directing therapy programs; train technicians; consult with professionals; administer therapy to mentally retarded residents. Bachelor's degree in physical therapy and completion of internship required. Must be licensed or eligible in Montana; prefer two years' experience or equivalent combination of education and experience.

Physical Therapy Supervisor: Annual salary - \$15,722. Planning, directing therapy programs, train technicians; consult with professionals; administer therapy to mentally retarded residents. Supervision of approximately eight P.T. technicians and one physical therapist. Master's degree in physical therapy and completion of internship required, with four years' experience or equivalent with experience with developmentally disabled. Must be licensed or eligible in Montana.

Licensed Practical Nurse: Annual salary - \$9006.-9900. depending upon experience. Provides nursing care to mentally retarded residents in living areas. Chief duties are administration of medications and treatments

and sick call. Must be graduate of accredited school of nursing and licensed or eligible in Montana.

Registered Nurse: Annual salary - \$13,062-\$14,331 depending upon experience. General 23-bed acute hospital. Must be graduate from accredited school of nursing and licensed or eligible in Montana.

Special Education Teacher: Annual salary - \$11,919. Work with visually and/or learning impaired persons. Bachelor's degree in special education or a degree in a related field with teaching endorsement in special education and special training and/or experience in teaching visually and/or learning impaired. Must have or be eligible for Montana teaching certificate.

NON-AMBULATORY COMMUNICATION PROJECT
By Colleen McGee, Training Officer I

A new Title I project has been established to provide unique services to non-ambulatory developmentally disabled individuals. One of the project's main features is the transportation of residents from cottages 16 and 17 which adjoin BRS&H's acute care hospital, to a classroom setting in Cottage 4 across the river. Cottage 4 closed for resident living purposes last year and now finds use as office and classroom space.

The main purpose of transferring the non-ambulatory residents is to place them in a totally new learning environment. The movement will hopefully promote peer recognition and trainer generalization, and provides an occasion which has been extremely rare in the past for the residents to get out of the hospital ward into another world.

Colleen McGee and Sue Otting recently started to conduct two sessions a day lasting one hour and a half and running Monday through Thursday. The original schedule of four sessions per

day is not possible yet, due to lack of a bus driver.

A group consists of four individuals on relatively the same functioning level. Each member participates in at least two group programs and one individual program. A period of free play and relaxation is also a part of the session. Some programs for the lower functioning youth and infants include sensorimotor and tactile stimulation, body awareness, response to name, object permanence, directed attention and reaching. Some programs for higher functioning individuals are color and picture matching, task completion, labeling and simple motor control. There are also plans to incorporate Total Communication into specific groups. Advanced academic skills, Non-SLIP and supplementary programs to the group activities are trained on an individual basis. Data is collected on prompt levels and the percentage of correct responses.

The area in Cottage 4 is divided into an activity or holding area, a sensorimotor stimulation area, space for a future relaxation and rest area and several individual training areas. Some of the renovations which are to be made include: a door built to the entrance, partitions moved in, electric outlets installed, mirrors and auditory-visual objects hung from the ceiling and shelves for storage built. Eventually, the trainers plan to paint murals on the walls.

Although the project is still in the very first stages of development, positive feedback has been received from staff members and from the favorable response of the residents themselves.

BOULDER TRAINING MODEL DEFINED

By Ron Langworthy, Training Liaison

The following list defines the components of the training model introduced last spring by Teaching Research and adapted thereafter to the institutional setting by BRS&H staff. Intervention on the model by cottages proceeds on two fronts (see Boulder Behaviorist V.4, No. 3; More on Teaching Research Contract). The Staff Development Training Center cycles through one cottage at a time

establishing the model in each before moving on to the next. Intervention in cottages not yet trained proceeds under the direction of the Cottage Supervisor and two HA IV's (in-service trainers) who have been previously trained in implementation of the model. Thus cottage staff, at a more gradual pace than the Training Center, establish components of the model according to objectives based on this list.

The list mainly defines quantity without being specific about quantity, since populations, staffing levels and environmental conditions differ in each cottage. Specific quantity definition would mainly include how many 1-to-1 programs and activity area sessions should occur each day. Since quantity is affected by so many variables, including day to day crises like diarrhea epidemics, and by staff absenteeism, vacations, the staff to resident ratio, and the percent of trained staff in the cottage, some kind of cottage accountability system is needed if a minimum quantity of training is to be established. That accountability system has not yet been settled, but it will involve a routine check of the extent to which the components are being applied. It will also require a prioritization of staff duties.

As cottages approach complete implementation of the model this list will no doubt see additions and refinements.

List of Components in the Boulder Training Model

1. All necessary improvements in the cottage environment have been formally requested.
2. Activity area is organized with the following components:
 - A. Activities appropriate to resident have been identified

in writing and are being used in the A.A.

- B. A schedule exists specifying staff and residents to be involved in the A.A.
 - C. Staff running the A.A. have no conflicting responsibilities during the time they are scheduled.
 - D. All staff running the activity area are routinely evaluated in that role and consistently achieve criterion.
 - E. A chart describing language levels of all residents involved in the activity area is posted.
 - F. Staff utilize language expectations in the A.A.
 - G. A toileting schedule is posted for all residents targeted for toileting programs and toileting accidents in the A.A. are minimized.
 - H. Undesirable behaviors have been baselined, and programs written to decrease them are posted.
 - I. Staff have been trained to follow the behavior programs and implement them when necessary.
 - J. Data on undesirable behaviors is analyzed weekly and appropriate decisions have been made accordingly.
 - K. Group programs have been scheduled and are being run consistently.
 - L. Data is maintained on group programs and they are being updated appropriately.
 - M. Stimulation data sheets are used routinely to determine effective reinforcers for individuals.
3. One-on-one programs are organized with the following components.

- A. All residents have been pre-tested in all skill areas.
 - B. Programs to reduce undesirable behaviors have been designed when necessary and are part of the clipboard.
 - C. Each resident has at least one one-one-one program specified on the clipboard cover sheet and it is being run 5 days a week.
 - D. Clipboards contain up to date information on language level, behavioral comments and reinforcers.
 - E. Clipboard programs are updated on a daily basis and appropriate updating decisions are being made.
 - F. All programs being run are appropriate for a given resident.
 - G. A maintenance file is established for residents who have graduated from programs and those programs are being assessed periodically.
 - H. A schedule exists for implementation of all one-on-one programs and staff responsibilities for these programs are assigned.
 - I. All essential PT and OT information is listed on the clipboards.
 - J. The people responsible for updating are specified with clear responsibilities for when they update which programs.
4. All programs being run in the cottage are being reported correctly into the data system.
 5. All programs have either been approved by the Quality Control Committee or have been submitted for approval.
 6. All individual programs conform to the format requirements defined by the Quality Control Committee.
 7. All employees running programs consistently reach criterion on observation forms.
 8. No programs being run are in conflict with the Individual Habilitation Plan.
 9. The techniques used in one-one-one training and the activity area are consistent with the techniques used by trainers in the Staff Development Training Center.
 10. All cottage staff have passed post test on Training Guidelines.
 11. New employees pass post test on Training Guidelines within one month of beginning work in the cottage.
 12. Content of IST designed to train employees on one-on-one techniques and activity area is specified and disseminated to Habilitation Coordinator and BR/TR Training Liaison.
 13. Programs to reduce undesirable behaviors which require controversial techniques have been approved by the Human Rights Committee.
 14. Inexperienced trainers are observed in the one-on-one role and the activity area at least twice a week.
 15. Experienced trainers are observed in the one-on-one role and the activity area at least once every two weeks.
 16. Training techniques used in the one-on-one situation and in the activity area carry over to incidental interactions with residents:
 - A. Appropriate behavior is shaped and maintained by positive reinforcement.
 - B. Inappropriate behavior is ignored or dealt with in a behavior program.
 - C. Inappropriate behavior is never reinforced.

17. The staff responsible for observing one-on-one programs or the activity area should be specified and scheduled.

18. Target behaviors for eating programs are clearly specified.

MIDWESTERN ASSOCIATION OF BEHAVIOR
ANALYSIS

The Midwestern Association of Behavior Analysis announces its Third Annual Convention to be held at the Blackstone Hotel in Chicago, May 14-17, 1977. MABA is an interdisciplinary group of professionals, paraprofessionals, and students who are interested in the experimental and/or applied analysis of behavior. The purpose of the Convention is to provide a forum for the presentation of papers, symposia and workshops concerned with aspects of behavior analysis. Included in the program will be invited addresses, conversation hours, and multi-media presentation. The Second Annual MABA Convention was successful in bringing together over 1250 persons interested in behavior analysis, and attendance for the Third Annual Convention is expected to be even greater.

For information on making a presentation, attending the 1977 Convention, or becoming a member of MABA, please write to:

MABA
Department of Psychology
Western Michigan University
Kalamazoo, Michigan 49008

Boulder Behaviorist Supplement

October 25, 1976

Vol. 4, No. 2

THE TEACHING RESEARCH - BOULDER RIVER TRAINING MODEL: UNDERLYING ASSUMPTIONS

By Dave Grove, Ph.D., Research Professor for Teaching Research

With increasing frequency entire institutions are pursuing staff training models which will facilitate the conversion from a custodial based facility to one emphasizing a developmental training approach. This frequency is partially the result of the behavioral zeitgeist, the pending implementation of federal regulations (Intermediate Care Facilities regulations scheduled for implementation in 1977), and the recent interest of the Justice Department in the rights of state institution residents. Consequently, existing staff training models are being scrutinized by institutional administrators, for applicability to institutional settings with the implicit realization that traditional institutional pre-service and in-service training models serve little purpose but to perpetuate the existing system. Unfortunately, few training models exist, outside industry, which are designed to expeditiously and efficiently impact upon an agency as large and as diverse as institutions for the mentally retarded.

One staff training model which is currently attempting the transition from a micro-system (i.e. training small groups of individuals with homogenous interests such as the public school classroom teachers) to a macro-system is the one developed in the Teaching Research Infant and Child Center in Monmouth, Oregon. (For a description of this model see: A Data Based Classroom for the Moderately and severely Handicapped, available from Instructional Development Corporation, Box 361, Monmouth, Oregon 97361.) Initial attempts to replicate this model at Boulder River School and Hospital in Boulder, Montana are encouraging and would strongly suggest that the model can impact and change the entire service delivery system of an institution if specific assumptions are accepted and adhered to during the introduction and training process. The purpose of this paper is to denote these assumptions and to present a rationale for their importance. In fact, these assumptions are not indigenous to the Teaching Research model but are rather a set of prerequisite assumptions for any successful large scale training effort.

The traditional pre-service training model attempts to indoctrinate individual staff members prior to their placement in the work setting (i.e. cottage). It was generally assumed that a staff member so trained would then facilitate the acceptance in their work setting of the principles expounded during training. The major fallacy in this reasoning is that the staff members residing in the work setting, prior to the new staff member's placement, are much more effective in reindoctrinating the new staff member than the new member was in converting the existing staff. Even training models which attempted to re-train staff members who occupied positions of responsibility (i.e. cottage or unit supervisors) tended to be unsuccessful not only because of the passive resistance of on-line staff members to change but also because of limits on the retrained staff members' resources, civil service restrictions, and union contracts. The most feasible alternative to this dilemma is to treat each work setting as a separate unit, requiring the training of all staff members within that setting before moving on to the next unit. Thus, the first assumption is: An effective staff training model must identify "cultural" units within an institution and then re-train all members of that culture as a group. Implicit within this assumption is the notion that once all individuals within a work setting have received training only staff members who have

received training would replace individuals from that "culture" who either terminated employment at the institution or who were transferred to another unit.

The initial training of the concepts and principles contained in a developmental treatment model cannot take place in the "cultural" units where the staff reside. Frequently, on-the-job training has been employed as a method to train direct care staff. This training is frequently interrupted by the custodial needs of the patients and also by routine administrative procedures. In addition, the trainer is treading upon dangerous territory because the trainee frequently "knows" more about the work setting than the trainer and therefore can control, manipulate, or eliminate critical training opportunities. The staff verbal response of "yeah, but..." is not uncommon in such training efforts. Thus, the second assumption is: An effective staff training model will establish a training site separate from the work environment of the trainees, which has as its sole purpose the training of staff. This center must replicate the cultural unit as nearly as possible and must therefore have the capacity to change as cultural units (i.e. cottages) cycle through this setting. Residents for the training center should be drawn from the cultural unit that is being trained with additional "problem residents" drawn from different cultural units in order to prepare the staff for the changing characteristics of resident populations.¹ Procedurally, residents may be selected prior to initiation of staff training and they may reside in a training center for a period of time (i.e. possibly one week) so that the training staff can evaluate each resident, establish appropriate habilitation plans, and test treatment programs.

The "software" or training packets to be utilized in the training center must be developed prior to the initiation of the training and must specify a sequence of skills to be acquired, by staff position (i.e. Psych. Aide I, Psych. Aide II, Psych. Aide III, Cottage Supervisor, etc.) in sufficient detail so that trainee skill acquisition can be documented. The instructional techniques to be utilized in assisting the trainee in mastering the skills must take into account the idiosyncratic learning characteristics of the trainee and therefore may include the use of modeling, video tapes of both trainer and trainee working with particular residents, as well as didactic techniques and simple written exercises. Thus, the third assumption is: An effective staff training model must prepare and field test objective techniques which document the degree of skill acquisition and a training packet which contains a delineation of sequentially identified skills, by staff position, which each trainee must demonstrate prior to returning to his/her work environment. It is interesting to note that these documentation techniques can subsequently be utilized to monitor and maintain the skills acquired upon the trainee's return to the work environment and in addition may be used prior to the trainee's movement into the training center in order to adapt the training opportunities to the skill level of the particular trainee.

The initial instruction of all members of a "cultural" unit along with appropriate documentation of skill acquisition should occur in a controlled environment (i.e. the training center controlled by training staff). It would be naive, however, to assume that upon completion of the training that members of the cultural unit could successfully transplant their newly acquired skills back into their work environment. It is obvious that the closer and the more relevant the training center environment is to the trainee's work environment the easier the transition will be accomplished. Therefore, the fourth

¹ This is particularly important during a period of rapid deinstitutionalization because the remaining institutionalized residents present more complex treatment problems.

assumption is: An effective staff training model will contain a well defined transition program which will assist the newly trained staff in transferring their skills back into their work environment. A model that is currently proving successful in making this transition calls for the closing of the training center following the training of all staff from a cultural unit and the center staff working in a trainees's work environment to assist in the transition process. Upon successful program implementation in the work environment the training center staff are free to return to the training center, once again select appropriate residents from the new unit, evaluate the residents, devise individual habilitation plans, and test treatment programs in preparation for intervention in the new unit.

An inherent problem in training institutional staff is the high staff turn over which has been attributed to numerous factors, ranging from low remuneration and excessive workloads to low morale and poor training programs. Although it is assumed that a high quality training program would reduce staff attrition it would probably not reduce it to the point that it would become reasonably stable without concurrent changes in some of the other contributing factors. Consequently, the training model must provide procedures to systematically and objectively document the level of skill maintenance and earmark resources from the training center that can be fed back into the work environment to maintain appropriate skill levels. Therefore, the fifth assumption is: An effective staff training model must come to terms with the instability of the direct care staff and provide routine checks on the skill levels of the direct care staff and provide methods to re-train in areas where skill deficits are apparent. A possible method to accomplish this is to identify a specific member of the training center who is given the responsibility of routinely monitoring skill levels within a particular "cultural" unit. In addition, an individual member of the cultural unit may be designated a trainer who has ongoing and daily responsibilities for monitoring and training his/her staff in specific skill areas. It is then possible for the cottage level trainer in negotiation with the training center evaluator to be recycled into the training center for more advanced training while at the same time a member of the training staff can assume the cottage trainer's responsibilities on the cottage. This provides for not only upgrading the skill levels of the cottage trainer, but helps to maintain contact between the training center staff and the cottage work environment.

The verbal and administrative support of the most stable portion of the institutional environment; that is, the management level personnel, is an essential concern. While management frequently verbalizes commitment to a developmental training model, they infrequently participate to the extent that they become valuable perpetuators of the system. Given the lack of detailed knowledge of the training model they are reluctant to demonstrate this deficiency and therefore fail to provide support through appropriate institution-wide decision making processes, through cottage visitations, and through reinforcing appropriate staff growth. Thus, the sixth assumption is: An effective staff training model will require all administrative staff, prior to the training of direct care staff, to cycle through the training center, demonstrate competencies and meet training objectives for all staff positions.

A discussion of "cultural" units within an institution implied that these units maintain separate and distinct reinforcement systems, staff relationships and expectations. However, one aspect transcends all cultural units; that is, past administrative directives (i.e. new programs, workshops, outside consultants, training programs, etc.) have typically had little impact upon direct care staff except to produce some temporary inconvenience.

Any attempt to seriously conform to these directives might be met with chastisement from one's peers and personal frustration. Given this climate the best staff response is to ignore "new" and "innovative" institutional programs. Thus, in most institutions there exists an administration-direct care staff credibility problem that hinders the implementation of any new program, let alone one proposing a drastic change in staff responsibilities. Certainly, the establishment of a training center and the active participation of the administration in the training would facilitate the demise of this attitude but additional steps are also necessary. The changing of a cottage environment that has traditionally emphasized custodial care to one which will emphasize a developmental training model frequently requires if not the renovation, the remodeling of the physical space of the cottage (i.e. specification of individual resident program areas, the identification of group areas, storage areas for instructional materials, etc.). These changes in the physical environment must precede any training and play a dual role of: (1) making implementation of the training model possible, but equally important; (2) demonstrating to the staff that the most valuable and restricted resource of the administration (personnel and money) are being committed to the project. In addition, it is recommended that while the training is preceding on a cottage by cottage plan the remaining cottages negotiate contracts with the training center staff that outline the sequence of events that would move that cottage from their particular level relative to the proposed developmental training model to full model implementation. Thus, the seventh assumption is: An effective staff training model must commit resources that will modify the physical cottage environments while at the same time attacking the credibility problem that exists traditionally between administrators and direct care staff.

The discussion so far has centered on the cultural work environments which are found within an institution. However, this concept should be extended to the professional staff within the institution (i.e. education, psychology, language and speech communications, physical and occupational therapy, etc.) as well. It is important that the nature of the training for these various professionals be modified slightly to include not only the hands-on therapy with the resident but an emphasis upon the converting of these professional groups into positions where they evaluate, prescribe and assist cottage direct care staff in implementing the appropriate habilitation plan. The day of naively assuming that additional resources will be allocated to insure that every resident has time with every appropriate professional discipline, in compliance with his or her habilitation plan, is over. These professional groups must use the direct care staff to carry out routine therapeutic programs and must reserve their own time for evaluation, devising appropriate programs, training direct care staff to implement these programs and evaluating the success of their training efforts by monitoring resident progress. Individual resident therapy time with a professional, must be reserved for chronic and difficult cases. Thus, the eighth assumption is: An effective staff training model must emphasize that habilitation occurs in the environment in which the child resides, conducted by direct care staff and that the professional disciplines must become trainers of staff and only directly serve those residents that time and personnel restraints will allow.

This paper has attempted to outline the necessary assumptions or prerequisite positions which an institutional administration must assume prior to implementation of a successful staff training program. Although the concepts are not the sole prerogative of any training model, they are the basic concepts contained within the Teaching Research Infant and Child Model as it applies to Institutional settings.

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THE BOULDER BEHAVIORIST

Vol. 4, No. 8

December 21, 1976

THE BOULDER BEHAVIORIST IS EXAMINED

This issue marks the end of four volumes of the Boulder Behaviorist (B.B.) begun on February 20, 1973. Since that time the B.B. has changed considerably. The B.B. for the first year and a half functioned with the primary purpose of reinforcing BRS&H staff for conducting training programs. As a manifestation of the gradual increase in sophistication in the skill level of direct care and professional staff, the B.B. gradually increased the sophistication of its content.

The mailing list rapidly expanded to the point where the B.B. is now read in most states in the U.S., all provinces of Canada, and such diverse countries as Guam, New Zealand, England, Germany, Jamaica, and South Africa. The B.B. has always been free of charge, available to anyone who requests to be on the mailing list. The B.B. is no longer a Title I publication as of September of this year. It is now funded by BRS&H and is still intended to be primarily a vehicle for staff reinforcement and information exchange.

The B.B. also is no longer the sole applied behavior analysis newsletter in the state. The Developmental Disabilities Division will soon put out their first issue of the Big Sky Behaviorist, a newsletter with a primary audience of community based D.D. service providers in Montana. Within this context of rapid development in the state and in BRS&H it now seems pertinent to state some purposes and goals for the upcoming year.

The purpose of the B.B. will continue

to be dissemination of information relevant to mental retardation, institutions, and/or applied behavior analysis. We will continue to print articles of the widest possible interest, publishing anything that may give useful ideas to workers in the 3 fields mentioned. Since it takes about 6 weeks to accumulate enough articles to print a B.B. we will try to publish 8 times per year. Anyone can submit articles. The only way articles would fail to be printed would be lack of relevance to three fields of interest or lack of detailed information on major points. We are especially interested in printing literature summaries, reports on innovative projects, discussions of controversial issues and reader responses to previous articles or questions posed.

In the interest of stimulating reader involvement and of gaining ideas for implementation at BRS&H, the B.B. would like to take this opportunity to pose the first in what is hoped to be a series of questions. If you have input on the questions raised by the following article please contact the Editor.

OVERCORRECTION - WE KNOW IT WORKS, BUT WHY?

By Tim Plaska, Habilitation Dept. Director

Since their development, "overcorrection" procedures (Foxy & Azrin, 1973) have been shown to be effective in decreasing or eliminating a wide variety of inappropriate behaviors including aggression (Webster & Azrin, 1973), stealing (Azrin & Wesolowski 1974), self-stimulation (Azrin et. al., 1973) and self-abuse (Azrin, Gottlieb, Hughtart & Wesolowski, 1975).

A recent review (Judkins, 1976) evaluating the use of overcorrection procedures with the institutionalized retarded concluded that

overcorrection is a promising strategy for solving a number of behavioral problems, but points out that "it is surprising that the initial overcorrection studies have not stimulated more research than has occurred."

At BRS&H, we are currently using overcorrection procedures, as outlined in Guidelines for the Use of Behavioral Procedures in State Programs for Retarded Persons (N.A.R.C. Research Advisory Committee, 1975), to consequence a variety of behaviors (aggression, property destruction, inappropriate verbalizations, pica behavior, stealing, teasing and toilet-behaviors).

We are interested in communicating with other programs using overcorrection and also would like to obtain any published or unpublished research relating to the following unanswered questions we have;

1. Can overcorrection procedures that are effective for one behavior be used to reduce the frequency of topographically different behaviors? Two studies (Epstein et. al., 1974), (Doke & Epstein, 1975) suggest that an overcorrection procedure found effective for one response class can be used to weaken a topographically different problem behavior. This brings up the question of whether it makes any difference what the subject practices during the overcorrection procedure. It may be that it is not important for the overcorrection procedure to be related to the target behavior and all that is necessary to reduce the frequency of the target behavior is to make an aversive response cost procedure contingent upon its occurrence.
2. Is there any research identifying behaviors or circumstances in which overcorrection is not effective?

3. When it's effective, how does overcorrection produce behavioral change? Is the decrease a function of feedback (telling the individual he behaved inappropriately), time-out (removal from a reinforcing environment), compliance training (providing verbal instructions), punishment effects (punishing noncompliance), response cost (forcing practice of the appropriate behavior) or negative reinforcement (returning to a reinforcing environment following the procedure)?
4. What are the critical components of overcorrection? Is anyone working towards analyzing and identifying the critical components responsible for change?
5. Is there any research in progress concerning the parameters of overcorrection procedures; e.g., how long should restitution or positive practice procedures be carried out? Are there differential effects of varying the parameters?

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REDUCTION OF SEVERE AGGRESSIVE BEHAVIOR THROUGH CONTINGENT APPLICATION OF OVERCORRECTION

By Pat Friman, Habilitation Aide IV

I met Jim S. while in Cottage 3 on a cottage practice assignment in December of 1975. He seemed happy, intelligent. eager to please. I spent an hour or so with him during which he took me around the cottage showing me items and places of interest, particularly his room and personal belongings. He talked a lot about himself and his family and in spite of some verbalizations extraneous to the topic at hand, he made himself well understood. I remember wondering to myself, "Why is this fellow in this institution? He obviously has enough self-help,

language and cognitive skills mastered to make it in a group home." With this in mind, I left Jim and went in the office to study his files. While browsing through the cardex, I was startled by a loud scream, a thunderous crash and the unmistakable sound of glass breaking. I went to the scene of the disturbance and found, to my astonishment, Jim screaming, kicking and flailing at two attendants who were preventing him from doing further harm to his victim who lay prostrate on the floor bleeding from his nose and mouth. There was a window in the corner shattered by one of Jim's wild punches. I had to look no further for the reason why Jim had not been placed.

A few days later I was permanently assigned to Cottage 3. As soon as I came on board I was infected with the main concern of the entire staff - what to do about Jim. He was like a time bomb. Any minor distraction lit the fuse, and he did not discriminate in his explosive attacks. As soon as an in-service trainee or visitor to the cottage came in the front door. they were taken aside and told to be wary of Jim "when he gets angry he swings at anything that moves."

The Medical Department suggested and then implemented a minor drug level increase. We noted a slight, temporary drop in the behavior, but unfortunately after two weeks it rose to its former frequency.

Disappointed, we began a cottage wide communication project instructing everyone who came in the door to be careful of this explosive individual and showing them distraction techniques useful in circumventing violent episodes. In spite of our intensive efforts, there were more bloody noses than I would care to count.

In April we heard of a vacancy in the Habilitation Department Intensive Training Unit which was a group home working exclusively with disruptive residents. Immediately, staff members began compiling an exhaustive documentation of Jim's assault record coupled with a cogent,

articulate argument for his placement in the group home. The request was turned down because the Habilitation Department Director felt our cottage staff had the resources and expertise to deal with the behavior.

On approximately April 10 we conferred with the HA IV in the Intensive Training Unit and the Habilitation Director on the subject of possible programmatic intervention. Using the information obtained from those two sources combined with ideas we found in articles on overcorrection (Foxx & Azrin, 1972; Epstein, Doke, Sajwaj, Sorrel, & Rimmer, 1974; Webster & Azrin, 1972) we designed a program to decrease Jim's aggressive behavior. The program has three major components: required relaxation, restitution and positive practice, and runs strictly according to a written format which has been approved by the Human Rights Committee. If Jim hits someone, he is taken to his room and required to lie on his bed for ten minutes. If he struggles or attempts to get up the clock is started over again (required relaxation). When he has lain quietly for ten minutes Jim is taken to another room, required to sit in a chair and apologize to his victim or a surrogate. Apologies are elicited with questions such as: Are you sorry? Will you ever hit again?, etc. Then he is asked to shake hands with his victim and with all the staff and residents in the immediate area (restitution). If Jim struggles or is noncompliant during any part of the restitution procedure, the 15 minute time period begins again. When he has completed 15 minutes of restitution compliantly we require Jim to do favors for his victim such as making his bed, cleaning his room, hanging up his coat, etc. (Positive Practice). This also lasts 15 minutes unless Jim is noncompliant, in which case the clock is started over again.

The program has been enormously success-

ful. Within four weeks we witnessed an 80% decrease in incidents per week. To date we've seen a 97% decrease (see Figure 1). In the 14 weeks before treatment (baseline) Jim had 70 violent incidents. During this period there was a high criterion for a recorded incident: Jim had to actually hit someone. In the 34 weeks following treatment initiation, Jim has had only 10 incidents. During this period there was a very low criterion for a recorded incident - attempted hits were counted. So the baseline is probably a conservative reflection of the actual frequency of the targeted behavior.

A short anecdote will illustrate the change in Jim. A short time ago, Jim's father visited the cottage. He stood with us in the office and talked of Jim's improvement. Just then we both noticed Jim walking down the hallway. Another resident ran in the doorway and collided with him. Jim shook himself and looked at the fellow and said "That's OK friend." He then came to the office, walked over and stood next to his dad. Mr. S. turned and put his arm around Jim in a spontaneous show of fatherly affection. Jim sort of nuzzled him and said "I didn't get mad, did I Dad?" Mr. S. stepped back, looking quite surprised, and said, "You know, I've never been able to do that before. Physical affection has always irritated Jim."

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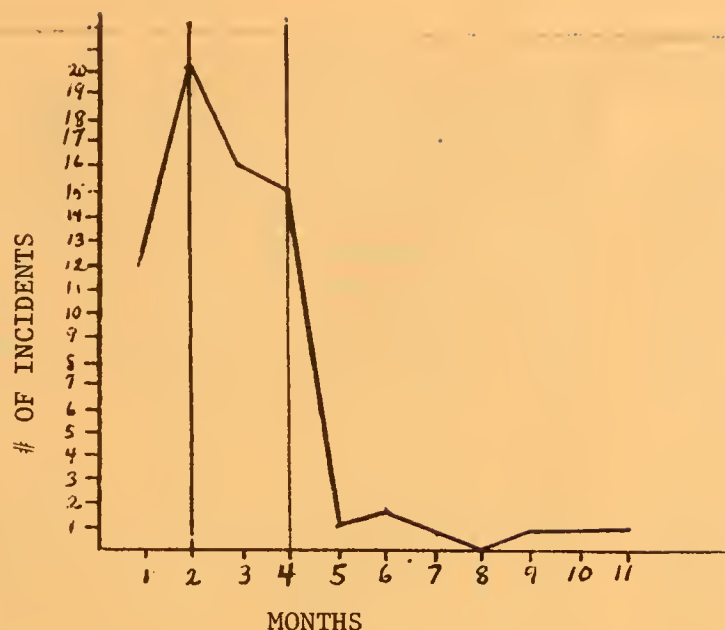


Figure 1. The number of incidents of Jim's hitting per month. A medication change occurred at the beginning of month # 2 and program intervention occurred at the beginning of month # 4. Thus baseline is months # 1-3. See text above for a description of the intervention procedure.

THE USE OF A VARIATION OF TIME OUT TO REDUCE CLOTHES SHREDDING: A CASE STUDY

By John Moore, Habilitation Aide IV

A brief time-out procedure discovered almost by chance has resulted in a drastic decrease in frequency of one of the most troublesome behavior problems in Cottage 13. The problem was Lora's frequent shredding and shedding of her clothes.

Lora has exhibited the shredding behavior for most of her institutional life, and the behavior was at a high, stable frequency at the time of her transfer into C-13 in June, 1976. No exact data is available regarding the baseline rate of clothes destruction, but what recorded observations there are indicate a mean of about 7 sets of

clothing (a pullover dress or both pants and top) per day, with the range extending from at least 2 to as many as 19 sets per day. Lora also exhibited other behaviors related to clothes shredding, including refusing to wear underclothes, tearing other residents' clothes, and destroying shoes. In addition, Lora would not wear a sanitary napkin during menses.

A variety of approaches to the shredding behavior was attempted. Allowing Lora to choose her own clothes and frequently reinforcing her for keeping them on yielded no significant decrease in their destruction. Another approach called for a half-hour delay of any one meal if the shredding occurred within one hour before the regular mealtime. This contingency was made known to Lora frequently during that precedent hour. The procedure was found to be effective only for the evening

meal, and that effectiveness is modified by the fact that Lora often tore her clothes immediately after finishing her meal. Using a conventional time-out procedure of standing Lora facing into a corner or wall with her arms at her sides for 15 second periods seemed to exacerbate the problem.

The staff then turned to attempts at quasi-restraint, i.e., dressing Lora in clothes that were difficult to tear yet apparently sufficiently loose-fitting to satisfy her personal taste. No fabrics, however, including 10½ ounce denim, were impossible for Lora to tear. Even when dressed in a one-piece denim jump suit on which all pockets were sewn shut and the zipper covered over with laced leather, Lora had her clothes off within an hour. The result of cottage efforts can be summarized in the dismal fact that Lora was at least partially nude about 65% of the time.

Just prior to Thanksgiving, however, HA I, George Kessner, indicated that he had had some success with a different time-out procedure and asked if he could continue it. (George was a fairly new employee and apparently didn't share in the mistaken assumption that Lora was almost hopeless.) The procedure differed from the above unsuccessful time-out only in that Lora's arms were held in a full extension above her head with the wrists crossed. Kessner outlined his intention of using the procedure to consequate the target behaviors of tearing or removing clothes while regularly reinforcing appropriate wearing of clothes. Permission was granted to proceed, and in four weeks' time the rate of Lora's clothing destruction has dropped from the mean of 7 sets destroyed in a day to a mean of 0.3 pieces of clothing torn in some way in a day. No clothing has been

rendered unwearable in the period from November 29th to now, December 16th. Lora has consistently kept underclothes on, and she wore a sanitary pad through her entire menstrual period from December 5th through December 8th, including night, without attempting to remove it. Since Lora removed clothes by ripping them off, and since ripping has decreased to nearly zero, she now has her clothes on appropriately nearly all the time.

The longest duration of any time-out used with Lora has been 2 minutes, with a mean of about 15 seconds overall. The greatest rate of implementation of the procedure has been five times in a day across two shifts, and the mean of implementation is roughly 2.5 times daily and currently decreasing.

Lora's vocalization during a time-out indicate that the procedure is highly aversive to her, but in some instances, Lora has performed the procedure independently when verbally cued by Kessner. Now it appears that trainer vocalization of the word, "corner," will eventually serve as an adequate intervention on the target behaviors.

Naturally, the encouraging results of the program must be attributed partially to Kessner's consistent and appropriate reinforcement of desirable behavior. In addition, there has been good cross-shift consistency in implementing Lora's time-out and giving reinforcement. However, from past efforts and the current results, it appears that the time-out procedure has been the deciding factor in reducing Lora's clothes-tearing behavior.

EDITOR'S NOTE:

Readers may be marveling with good reason at how the subtle difference between time-out in the corner and time-out in the corner with the arms raised over the head could possibly account for the marked success. The staff of Cottage 13 are unable to provide any more explanatory

conjecture beyond the observation that Lora idiosyncratically abhors putting her arms over her head in the T.O. situation. She is mildly spastic with athetoid movements in upper extremities. Her arms are usually kept in some kind of movement and extension. The procedure does not cause her physical pain, since staff have, in a non-contingent situation in a gentle, friendly manner, raised her arms over her head with no resistance or indication that this in any way displeased her. The message then, is not that staff should be perspicacious in finding effective punishers, like finding effective reinforcers. The conclusion seems to be that at least in this case a very subtle variation in a simple technique can be the difference between success and failure.

Since data has been presented for only one month of intervention, the next B.B. will include a follow-up on this case.

THREE YEARS OF PROGRESS IN TITLE I

By Tom Seekins, Supervisor/Coordinator Title I; Don Cross, Training Officer I

For the past three years the Data Analysts Laboratory operating at Boulder River School and Hospital has tracked fourteen variables relating to the performance of trainers, programs, and the residents served by the Title I project. These data are generally composed of daily collection of training results: time in sessions, total trials conducted, number of correct trials, etc.

This work has made it possible to compare various service delivery systems to one another and to track the efficiency of various approaches. For example, Swenson (1975) discusses the results of a comparison of three service delivery systems based on data from the DAL and other sources.

It also allows for an historical perspective of a training project.

For an example, Figure 2 depicts the three year change in the percentage of scheduled training sessions completed. This measure relates to realistic planning as well as effort. Over the years, trainers learned how to efficiently schedule and complete training. This trend in efficient planning is continuing during 1977 (see Figure 2).

Table 1 shows the training effort produced by each trainer over the three years. The number of sessions scheduled is rather stable, but the other measures indicate continued improvement. Some of this improvement is related to specialization of the grant. In 1975, for example, Title I engaged in many activities other than training. In 1976, however, training was the primary emphasis.

The DAL also allows us to determine some other interesting facts. The average trainee produced 16.3 hours of training each week during 1976. The standard deviation, however, was 14.6 hours.

Each trainer scheduled an average of 57.3 sessions per week. The standard deviation was 26. The average trainer completed 71% of those sessions s/he scheduled; with a standard deviation of 23%. The average resident involved in training was included in programming for twelve weeks. But again the standard deviation was large; 10 weeks. In the year to come one goal will be to reduce the variability.

The complete details of the Title I Project at Boulder and the Data Analysis Lab can be obtained from Tom Seekins, Supervisor/Coordinator of Title I or Marion Thompson, Director, Data Analysis Laboratory.

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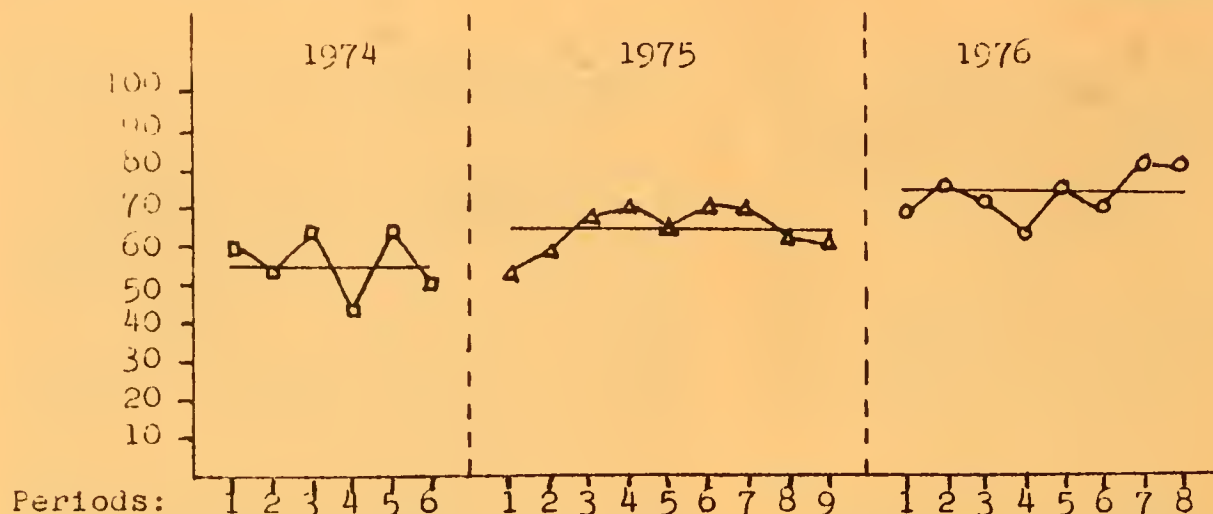


Figure 2: The comparison of the percentage of scheduled sessions completed for the three grant years of 1974, 1975, and 1976 are presented. This measure is referred to as planning as it reflects the accuracy of scheduling a number of programs that can be reasonably completed. The horizontal line indicates the yearly average.

Individual Training Effort

	<u>FY '74</u>	<u>FY '75</u>	<u>FY '76</u>
Sessions Scheduled by Each Staff Member	1,550	1,130	1,500
Sessions Completed by Each Staff Member	856	750	1,082
Average Percent of Completion	55%	67%	73%
Hours of Training by Each Staff Member	110	310	420

Table 1: The training effort of each individual staff member during each of the three years of the grant is presented. Though the years of 1974 and 1975 produced a greater total amount of training, each staff member in the 1976 grant produced more training than in any previous year.

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